F
99
D55

Dorsey, George A.
Hows and Whys of Human
Behavior

DATE DUE

UNITY SCHOOL LIBRARY
Lee's Summit, Missouri 64063

R. D. Clark
1929

Mabel
Ulrich's
Book
Shop

Minneapolis
St. Paul
Duluth

Digitized by the Internet Archive
in 2025

https://archive.org/details/bwb_C0-ARW-591

HOWS AND WHYS
OF HUMAN BEHAVIOR

HARPER'S MODERN SCIENCE SERIES

WHY WE BEHAVE LIKE HUMAN BEINGS
George A. Dorsey, Ph.D.

CONCERNING THE NATURE OF THINGS
Sir William Bragg, K.B.E., D.Sc., F.R.S.

THE WAYS OF LIFE
Richard Swann Lull, Ph.D., D.Sc.

THE A B C OF RELATIVITY
Bertrand Russell

In Preparation

THE REVOLT AGAINST DARWINISM
Edwin Grant Conklin, Ph.D., Sc.D.

HISTORY OF SCIENCE
Charles Singer, D.Litt., M.D., F.R.C.P., F.S.A.

HARPER & BROTHERS
PUBLISHERS

HOWS AND WHYS OF HUMAN BEHAVIOR

BY

GEORGE A. DORSEY, PH.D.

author of

WHY WE BEHAVE LIKE HUMAN BEINGS

DISCARD

HARPER & BROTHERS PUBLISHERS
NEW YORK AND LONDON
1929

UNITY SCHOOL LIBRARY
Unity Village
Lee's Summit, Missouri 64063

HOWS AND WHYS
OF HUMAN BEHAVIOR

Copyright, 1929, by George A. Dorsey
Printed in the U. S. A.

A-D

First Printing, December, 1928
Second Printing, December, 1928
Third Printing, December, 1928
Fourth Printing, December, 1928
Fifth Printing, December, 1928
Sixth Printing, December, 1928
Seventh Printing, January, 1929
Eighth Printing, January, 1929

BF
199
D55

CONTENTS

PREFACE vii

CHAPTER

I. WHY ARE WE BORN GAMBLERS? 1

II. WHAT SHOULD EVERY MOTHER KNOW? 16

III. WHAT SHOULD EVERY NEW-BORN HAVE? 33

IV. HOW DO YOU GET THAT WAY? 52

V. HOW MUCH OF YOUR BRAIN DO YOU USE? 74

VI. WHY SHOULD YOU CONTROL YOUR EMOTIONS? 93

VII. WHY DO WE FALL FOR EACH OTHER? 115

VIII. WHY DO WE FALL OUT WITH EACH OTHER? 130

IX. HOW DOES YOUR JOB FIT YOU? 145

X. WHY DO YOU SLEEP SO MUCH? 166

XI. WHY DO WORDS BOSS YOU? 187

XII. WHAT DO YOU READ? 206

XIII. WHAT IS YOUR "ROYAL ROAD" TO LEARNING? 224

XIV. What Is Wrong with Your Mind? 243
XV. How Can We Be Happy Though Married? 265
XVI. Why Aren't We the Happiest People in the World? 283

PREFACE

WHY do we do so and so? How do we get this way or that? What should we do to be thus and so? Such are the eternal riddles of human behavior. Some of the most important of these riddles have been propounded to the author by the editors of the *Cosmopolitan* and *American* magazines, and this book represents the attempt to solve them in terms of common understanding and common sense. The solutions, however, are not to be thought of as final or complete—or as entirely satisfactory to the author.

There is nothing simple about human nature or in human lives; nor can an account of any human act be considered complete or final so long as biology, physiology, and psychology continue to be living sciences. The riddle of sleep, for example, has busied the author at odd times for many years and sent him questioning to some of the world's great physiologists. Sleep remains a mystery of very considerable magnitude. Nor is the author at all satisfied that he knows what is wrong with his own mind. Indeed, he gravely doubts that he has one at all! But he was taught to behave like a human being, and therefore takes this opportunity to thank Mr. Ray Long and Mr. Merle Crowell for helpful suggestions and for permission to reprint these articles from the *Cosmopolitan* and *American* magazines.

GEORGE A. DORSEY.

NEW YORK CITY.
January, 1929.

HOWS AND WHYS
OF HUMAN BEHAVIOR

CHAPTER I

WHY ARE WE BORN GAMBLERS?

Our Embassy in Madrid celebrated the signing of the Armistice with a big dinner-party. I left at about four o'clock with my friend the Major, and the night being fine we decided to take a walk before going to bed. After a turn on the Paseo de Recoletos we headed up Calle de Alcala toward the Puerta del Sol, intending to return home by way of Calle de Hortaleza.

Here is where Fate enters. The Major that day had drawn three months' pay and had not yet converted it into a draft to send home to his family; it was burning a hole in his pocket. Before we reached the Puerta del Sol we dropped into the Casino de Madrid, a fashionable club in the heart of the city of which we were members by virtue of our diplomatic rank.

And of course we went up to the great gaming hall on the third floor.

The favorite game at that time was *trente-et-quarante.* Scores of the runs since the opening of play in the afternoon were to be seen on a big board at one side of the room. With one swift glance at the board the Major exclaimed: "Look! Red has come up nine times running!"

Without more ado he edged his way through the crowd around the table and laid 100 pesetas ($20) on black. It came red. He then backed black with 200 pesetas. It came red. He put a 500-peseta note on black. Red again. A

1,000-peseta note disappeared as red came up for the thirteenth time in succession. He then placed two 1,000-peseta bills on black. Red again. Three 1,000-peseta bills disappeared as red came up for the fifteenth time; and the Major was "broke."

"Any money with you?" he asked me. I had some silver and two 1,000-peseta notes, which I handed him and which he placed on black. Red repeated for the sixteenth time. And we were both "broke."

It is not part of this story to record the further vagaries of that game of *trente-et-quarante*. I may add by way of general interest, however, that red repeated twice more, black came up just once, and red again repeated eleven times.

A phenomenal run, of course. Anyone who could have predicted it could easily have broken the bank of the Casino de Madrid.

Had the Major arrived at the beginning of that long run and steadily backed red, with an initial investment of 100 pesetas he could have stopped with the ninth play winner by more than his year's pay in the United States Army. Had he continued to play red, and had the house placed no restriction on the size of his play, he could have stopped on the sixteenth play of that run winner by more than $600,000.

But, in sharp contrast to the "might-have-beens," the cold fact is that inside of a few minutes the Major was broke and owed me 2,000 pesetas. He had lost just 8,800 pesetas. As the peseta at that time was about the only currency in the world at a premium, he had lost about $1,700.

That was a great deal of money for the Major to lose. In fact, at that particular time he could not afford to lose any money. He was living at heavy expense in Madrid, he had a wife and children at home to support, and nothing but his army pay to do it on. It was a sad Major who walked out of the Casino that night. The only significant remark he made was: "I feel like a dog!" And when one feels like a dog it implies that one hasn't behaved like a human being.

One other instance from real life. Among the eight players in a Friday night poker game in New York not long ago was a clean-cut young business man of about thirty. At the beginning of the game he announced that he positively must quit at midnight—he had to be up early the next morning to drive his wife and children over to Long Island to spend the day with the grandparents.

When the game broke up at eleven o'clock the next morning he left behind his I O U for $3,000 and carried away a check for $65, the difference between what he had actually lost and his I O U. That check, at his request, was drawn to the order of his wife; he could thereby prove to her that he had not spent the night in vain or failed his family without some reward.

He has not yet repaid that $65.

I have no record of what he said on leaving a game in which he had lost at least $2,500 more than he could afford to lose and which had caused his wife a sleepless night and wrecked the happiness of two families for a day, but I can imagine how he felt and I can suspect that he called himself, among other names, a skunk. He will probably feel like a skunk until he has taken up that I O U and probably won't regain his self-respect until he has had his "revenge"!

Another Friday game began at four o'clock because my friend Hector had to quit at eleven to meet his wife after the theater; he wanted a good long game. He got it; that game broke up at ten o'clock Sunday morning—forty-two hours. Hector drove forty-five miles to his Connecticut home, went to bed and stayed there for a week. It nearly killed him.

Hector is a huge man, hard-headed, methodical, and as punctual in his habits as a clock; and he dotes on comfort and fresh air. Yet he sat humped up in a hard chair in a little room thick with smoke for forty-two hours. His income exceeds fifty thousand a year and he loves money, but if anyone had proposed that he repeat that performance in that same room, *all alone,* he would have sworn he couldn't do it to save his life, and if he could he wouldn't do it again for fifty thousand dollars. But it is an even bet that under similar circumstances he would stick to the game till he collapsed. Talk about man's inhumanity to man!

For years gambling on the market was the hobby of a New York artist friend of mine. He was often "broke," of course. He married, had a baby, and had saved up $2,000. Then he got a sure-thing tip that a certain motor stock would double in value before the end of the year. He plunged—on a 20-per-cent margin. When he let go he was "broke" and had lost every nickel he could borrow from his friends. It took him three years to dig out.

Idiotic? Yes, in a way. But idiotic behavior is not natural to human beings. Why, then, if we are natural-born gamblers, did these otherwise sane and normal human beings behave like idiots? But before we discuss their psychology let us see why every human being is a born gambler.

To gamble is to take a chance. Did you ever see a human two-year-old who wouldn't take a chance on anything—explore with eyes, ears, nose, and tongue, anything it could get its hands on? This youthful keenness to explore is so striking, so persistent, and so automatic, as it were, that it has been dubbed *instinctive.* We are said to have an instinct of curiosity. I prefer to call it reflex action—a reflex we humans share with all higher animals, especially with our simian cousins. Call it the *investigatory reflex.*

Without such reflex action on our part—as infants, as children, as adults—we would never know the world that stimulates our sense organs and is reached by hands and feet. We remain infantile, or are old indeed, when we cease to be moved to investigate, when we cease to take a chance. Hence we may say that we are born gamblers because we must investigate to learn what's what and who's who in the world; otherwise we cannot behave like human beings. We are not born with that knowledge, we must learn it—and always and only at the cost of time and effort, and often of many hard knocks. For it is true, as the Latin proverb puts it, that what hurts teaches *(qui nocent docent)*; or, as we say, we learn from experience.

For example: One grasp of a red-hot poker yields a child more lasting information than all the "don'ts" at the family's command. It takes a chance on the cat's tail, with a bottle of ink, father's watch, mother's hat; takes chances on anything within reach of its eyes or ears that it can get its hands on. The astounding thing about a young child is its eagerness to take chances. Otherwise it could not learn whether things are good to eat or drink, or whether they can be pulled, pushed, climbed, kicked, broken, or spilled with impunity.

Therein is the significance of being born human—born dumb yet with an insatiable desire to explore, a blind indifference to the outcome, and a huge capacity to learn from experience.

Such is our biologic equipment. Such is the birthright of every normal human being. As a result, the child learns. It learns from experience and from the advice of its elders.

In acquiring wisdom, in taking on specific ways, the infant soon learns to behave like a human being. What kind of human being? More or less the kind of human beings it has lived with. As a result, by the time the individual is five or ten or twenty, its ways, its specific forms of behavior, will reflect the ways and forms of behavior of the social community in which it has grown up. In other words, you and I in our individual behavior reflect the behavior of our teachers—using "teachers" in the broadest sense.

The background, then, of the behavior of every human being is a system of habits and a fund of experience, both engrafted on innate human nature; and that, as I have said, begins without knowledge, is curious and loves to explore. As a result of exploration and in consequence of the habits which have been formed, the average individual by the time he has reached maturity is more or less fitted to carry on in some particular stratum of society.

As long as he is in the stratum or situation for which his experience fits him and on the job for which his habits have fitted him, he performs as a normal human being. But dropped suddenly into a new situation or confronted by a new job or a new proposition, he may behave like a coward or like a hero or like a skunk or like an idiot. The point I am stressing is that the average man in a brand-new situation may and often does behave in a way which is destructive to himself or contrary to the rules and regulations of society.

For example, the world has hardly ceased to gasp for breath at what it was pleased to call the "luck of the Flyin' Fool." In applying that epithet to young Lindbergh the world overlooked the fact that Lindbergh's training for years had been such that for him the flight from New York to Paris had scarcely more novelty in it than there would be for Bill Tilden in playing a game of tennis on a new court with an opponent he had never seen before.

The outstanding psychologic factor in Lindbergh's flight was his absolute confidence in himself. That confidence was born of his knowledge of what he had done; he had a profound conviction as to what he could do. The hop from

New York to Paris was just another day's work. A bit longer, of course, than he had had up to that time, and with certain novel features, but otherwise it was to him the same old game, the game that he could play as Tilden plays tennis—with heart, mind, and body, and with every ounce of his energy.

In that sense, then, regardless of color or other physical features and the time or community in which we are cradled, we are all born gamblers.

Every immigrant is, in a sense, a gambler; every business venture is, in a sense, a gamble. There are no sure things in life but death and taxes.

But let us return to the question why it is that in certain kinds of gambling otherwise normal human beings are prone to forget all they have learned and under the drive of some force which seems beyond their control wake up to find themselves bankrupt in self-respect or money or both.

The Major was not the only man around the *trente-et-quarante* table that night who went "broke," but I venture to say that few, if any, of the old hardened gamblers did. They knew what the Major might have known if he had stopped to think for a minute. Red had come up nine times. What was the chance of red or black coming up with the next play? Fifty-fifty. You see, cards are dumb; they didn't know that red had come up nine times! The law of chance is always fifty-fifty, with each spin of the roulette wheel, each flip of the coin, each hand in a game of *trente-et-quarante.*

The chance, I repeat, against red coming up sixteen times in succession was very great, but what the Major failed to take into consideration at the time was that, with an initial bet of 100 pesetas, and doubling the bet each time, it would not require many plays to wipe out his little capital.

Ordinarily the Major would no more think of going into the Casino and betting 3,000 pesetas on the turn of a card than he would of jumping off the Brooklyn Bridge, but carried along by the excitement, gripped by his obsession that red simply could not come up fourteen times in succession, and stung by what he had already lost, he was literally goaded into making a bet which in his sober senses he would never think of making.

It is in such situations that not only the gambler but any human being is likely to behave like an idiot.

How about the young business man who lost $3,000, got himself in wrong with his family, with his friends, with himself? The same psychology holds for him also.

And why did Hector, the strong man, play poker till Sunday morning when he should have quit on Friday night? Because he was forty dollars behind at eleven o'clock; he could get it back in one round and his wife would have to wait only ten minutes. At the round's end he was not even; he never did get even—he was the one big loser.

Why didn't he quit? Because he wasn't a quitter. To quit loser was to quit defeated; and that was more than he could stand. And rather than quit loser by a few dollars he would break dates, drive his wife nearly crazy, and risk his life.

Hector, of course, was no Ancient Mariner to hold that crowd for forty-two hours—he was simply its outstanding figure, its horrible example. The crowd was having a good time, playing hooky from the routine of life, being boys again down at the old swimming hole. Time meant nothing. The passing of midnight, the coming of dawn, the light of high noon, growing dusk—stimuli normally helping them to regulate life's routine—meant nothing; they were absorbed in a struggle which held them, mind, body and soul. Not for all the money in the game would any one of them have sallied forth in broad daylight on a Sunday morning, haggard, unshaven, hollow-eyed; yet there they were, feeling and looking like whatever it is the proverbial cat drags in.

Note, please, that the men I am talking about in these poker games are not professional gamblers; they do not make their living by "gambling." They are business men, lawyers, doctors, writers, artists. They can't afford to lose a whole night's sleep, and few of them can afford to lose very much money. To some of them the loss of a night's sleep or of several hundred dollars means a definite slowing up of the routine of life for days, possibly for months.

The contagion that holds the crowd around a roulette wheel or a gaming table is often spoken of as mob psychology, but that term is too general. What really happens seems to be something like this:

Here are eight men in a poker game, let us say; all self-respecting, each successful in his own field of endeavor. They are well acquainted with one another. The game starts, friendly, modest—often to warm up rather fast, especially in a poker game. Rivalry, the hatred of being beaten, the joy of victory, all enter in, but the fight element especially appears and becomes rampant.

Men who normally are not greedy or avaricious or pugnacious have become within two or three hours almost like a pack of famished wolves fighting over a poor carcass. And it is a real fight, not personal, of course, but a fight for possession, a fight to ward off defeat. What was a *game* has become a *fight*, a struggle for supremacy. Little mercy is shown—and then often to meet with derisive laughter.

The game has literally become a fight. Adrenalin, an enormously potent drug secreted by the little adrenal glands just above our kidneys, is released into the blood stream. Under its magic drive heart and lungs speed up and additional physiological fuel is supplied to our fighting-fleeing-talking mechanisms, thereby increasing their efficiency at the expense of our viscera. The viscera quiet down, we cease to feel hunger even though the stomach be empty; but we can fight harder, run faster.

That is the kind of drug adrenalin is—a crisis remedy; it drives us to become less human, more animal. A fight is a crisis. A poker game is a fight.

In a forty-two hour poker game there are factors other than adrenalin: stimulus of crowd, freedom from routine responsibility, excitement from the give and take of badinage and stress of competition; and the feeling that one might as well be hung for a sheep as a lamb! The loser doesn't quit because he must get even; the winner because he must win more. Neither can quit because stimuli which normally send both of them to bed or to work are replaced by stimuli which drive them to behave like idiots. Idiocy is not normal human behavior.

Twelve o'clock has come and gone; the game goes on. The losers . . .

Before we look at the losers as the clock struck twelve, let us consider the psychology of the winners. Do they want to quit? Rarely. Mind you, I am not talking about professional gamblers; I am talking about the average man who when he gets to Monte Carlo feels he must just take a chance with the wheel, or the average man who now and then indulges in a friendly poker game.

The winner at twelve o'clock always has an alibi. The alibi is always the same: "I just felt ashamed to quit, because I was ahead." It sounds reasonable, and the losers are ready enough to accept it. I suspect it doesn't tell the whole truth. I suspect that the real psychology of the winner who doesn't quit when he said he would is that there is still money to be won. By twelve o'clock it is no longer a friendly game of poker, it is a fight for money. If he has won $5 or $50 or $100, why shouldn't he be able to win that much more? Why should he quit in the middle of a winning streak?

As a matter of fact, they rarely do. I have seen many American officers play roulette in the Majestic Club in Lisbon; I don't recall that I ever saw any one of them leave the wheel until broke.

I saw one young officer run $20 into $800. With such luck as that outside that hall he would have known what to do, but if he could win $800, why not $1,000? That, as a matter of fact, after he had passed the $600 mark, had become his goal: "When I win $1,000 I'll quit!"

He did quit—when he had lost every dollar he had in his pocket. And his alibi was the usual one under such circumstances: "Oh well, I didn't expect to win any money; I just wanted to have a bit of fun. I had it. I paid for it."

That is what they say; it is not necessarily what they think.

The young man who lost $3,000 was only about $100 loser at twelve o'clock; he could have quit then without crippling himself, but he had been caught up in a fight. Quit $100 loser? The very idea would have seemed revolting—if it had occurred to him! He too was obsessed by the idea that the sort of luck he had had in the little poker game which in four hours had set him back $100 could not possibly last much longer. Obsessed by the idea that winning hands were just around the corner, he was always trying to anticipate them by what is known as "bulling the game." He "bulled" it—just as the Major had.

Anyone at all familiar with experiences such as are not uncommon at Palm Beach or Monte Carlo, or who has played much poker, knows that the two examples cited at the beginning of this story are not overdrawn, and he knows further that they are typical. I might have cited the example of a brilliant young lawyer in Chicago who in one year gambled himself so far into debt that suicide seemed to him the easiest and only way out.

Or I might have cited the equally astounding and even more tragic performance of a distinguished surgeon who dropped into a university club one night for a couple of hours' poker, knowing that he must be at a certain hospital at nine in the morning to perform an extraordinarily complicated and dangerous operation. When he quit the poker game thirty-six hours later his patient was dead and the surgeon himself was in so deep in the eyes of the few who knew the facts that he had to abandon his practice in that city and go elsewhere.

Yet that surgeon, to my personal knowledge, was a man of extraordinarily high character and had a keen sense of responsibility to his profession.

Under the excitement of a game which in a very short time had grown to one of great magnitude, he found himself in a situation he had never been in before. The habits of years of decent human behavior suddenly failed him in this new crisis. His sense of obligation to his patient, to his profession, to his own self-respect, disappeared as he became a fighter.

His blood was up—literally up. Adrenalin was at work, and its drive was so powerful that it was easier for him to behave like a beast than like a human being.

The psychology of the average man who gambles on the stock-market is just the same. He has not acquired a set of habits which enable him to function like a normal human being from day to day once he has decided to take a plunge in the market. A lucky chance shot may have enabled him to run $1,000 up to $5,000 and the $5,000 may represent a year's wages in his regular occupation. What does he do with the $5,000? The average man goes broke with it.

One difference between a friendly poker game and playing the stock-market is that in the poker game the money stays in the crowd, but when those same players gamble on the stock-market the "kitty" (brokers) ultimately gets the money.

It is not to be understood, of course, that every man who plays poker or roulette behaves like an idiot and goes broke, or habitually breaks important engagements, or gets in so wrong with himself that suicide is the only way out. I don't mean to say anything of the kind.

Lots of men can and do keep their heads in poker games, at Monte Carlo, in any form of gambling. They quit when they know they ought to quit; they lose no more than they know they can afford to lose; they can quit with a modest winning at any time. They can do such things because they have learned what, in short, is commonly called self-control. They don't get so emotionally excited over the loss of anything that they sit down and cry over it.

I know one man who by the time he has lost a few dollars in a poker game is so emotionally worked up that he literally gets sick—even bicarbonate of soda won't relieve him! In that condition he isn't fit to fight; he rapidly develops an "inferiority complex," and when he does get a good hand is afraid to bet it. He is a good example of lack of self-control. But the man who takes a loss with equanimity is ready to accept the next play on its own merits, for, after all, each play in any game is a new play and must be taken on its merits regardless of what has happened before.

A man of self-control, no matter what he has lost, is able to keep his wits about him, is always prepared for any move, and when he has had enough he knows it and quits. That same man, winner or loser, quits when he is tired or when he has had enough. In other words, he retains the use of his head and is not controlled by his viscera. He is neither fighting nor fleeing; he is playing poker, or whatever the game may be. And it is fairly certain that that kind of man when a boy was neither a cry-baby, a coward, nor a bully.

That kind of man does not stampede in a fire, in a panic, or in a shipwreck. He may not do the wisest thing, but he is not quitting the job, nor does he ruthlessly trample over the rights of others. He is playing the game, acting like a human being all the time. No matter what the situation may be or how much novelty there may be in it, he has such control over himself that he is able to use whatever wisdom he has and can get such service out of his arms and legs and voice as he can expect from the training that has gone into them.

The man who does not behave like a human being in a gamble is the man who as a boy has not learned to take chances, who has not learned to profit by experience, and who has not learned to use his brain to get him out of difficulties, but has hung on to his mother's apron strings or sought refuge in flight or blustered his way out like a beast.

And so, while we are all natural-born gamblers, we are not necessarily all good gamblers when the stake is high or the situation dangerous. We may fail in the crisis; we may whine and snivel or run like whipped curs; or we may bluster and brag or fight like senseless beasts. Or we may play the game. There are gamblers and gamblers.

There is such a thing as *character*. It is not born, it is formed. And it can become so ingrained that nothing can wash it out, so craven that nothing can ennoble it, so fine that nothing can tarnish it, so strong that it fears nothing in life and in death finds nothing to fear.

The real thoroughbred cannot behave like a tin-horn gambler. The tin-horn can never behave like a human being when real courage and high honor are at a premium. He can shine when the going is safe, but when the crisis comes he plays safe, even though he must thereby repudiate all that mankind has won in its struggle to be decent and humane. He is not a good gambler. Cornered, he can't behave like a human being, he can only behave like the worm or the snake or the jackal that he is. He would venture little to gain much; and when he loses, squeals.

Man's conquest over nature has not been won by playing the game that way, but rather by great ventures with slight gains. These gains have been pyramided throughout the ages and today form our cultural heritage. And because of them man's behavior has become less bestial, more humane.

That too often gamblers behave like idiots or sharks is reason enough for society's disapproval of games of chance and mistrust of those who profit from them or fall victims to their lure. Society's approval of those who chance their own lives that the risk of living may be lessened and the opportunities for life increased is evidence of even higher intelligence. And with equal propriety does it call those who have found truth *benefactors* of mankind, and those who have laid down their lives in search or in defense of it the *heroes* of mankind.

Mothers, especially those who have paid the price of gambling sons or husbands, know all this and govern themselves accordingly. Or do they? What should every mother know?

CHAPTER II

WHAT SHOULD EVERY MOTHER KNOW?

I WONDER how many mothers last year named their unborn offspring Charles Lindbergh—only to find that it was a girl; or how many thought that by praying, wishing, or thinking, they could exert such an influence over their unborn child that it would inevitably develop a Lindbergh character! I know of at least one mother who thought she could. And it *was* a boy, and she just *knows* he will grow into a sturdy, fearless lad destined to emulate the popular hero he was named after.

"How do you know?"

"Because . . ."

Now why do we call "because" a "woman's reason?" Because she often speaks from feelings—and with conviction—when she has no glib word reply; "because . . ." becomes a short cut for: "Oh, I can't put it in words, but all that I know leads me to a belief so strong that I feel it must be so."

So it was that our great-grandmothers knew many things that are not so—as, for example, that the earth was flat; that a child born with a blue vein on one side of its nose was sure to drown; and that if a child's nails were pared before it was a year old it would become a thief, but if thereafter its nails were pared over the family Bible it would as surely be honest. Why? "Because . . ."

Why can no mother—or for that matter no physician—predict the sex of the unborn child? Because she cannot;

but she—and the physician—can guess right fifty per cent of the time. And fifty-fifty is enough for most mothers—and some physicians.

Why can no mother—or anybody—predict the fate of her unborn child? Because neither mother nor anyone can predict the future and hence cannot predict the day-by-day endless stream of influences which will so mold the child that it will bend easily to one breeze and straighten up to another. Our grandmothers collectively knew thousands of rules, formulas, and rites, the observance or neglect of which predestined the child to this or that career, character, or personality.

But they overlooked one important point; there was a flaw in their reasoning. Did the boy whose baby nails were pared become a thief just because of the violation of a family superstition or because of other factors which made theft more or less inevitable? They did not inquire into that.

The finger nail is, of course, only one of countless superstitions which served our credulous grandmothers as a cloak for their ignorance. Another equally faulty reason why a boy grew up a thief was that the sins of fathers are handed on to sons, even to the third generation: he had inherited the trait from father; it was in the blood.

Why *does* any son ever become a thief; why don't all boys grow into Lincolns or Lindberghs? Who is responsible? This reminds me of an incident which occurred last winter. I had just finished a lecture before a mother's club in which I had stressed certain obligations of motherhood. An irate woman sailed up to the platform and shot this at me: "That's just like you men, putting the responsibility on the mother!"

To which I could only reply that I had no more put responsibility on motherhood than had astronomers put the rings around Saturn. But I did point out that once these rings were discovered man could revise his almanac, and that possibly a biologic concept of motherhood might help us revise our social calendar.

What is motherhood?

Motherhood is an ancient institution in animal life, and in animals higher than reptiles is more than a mere institution to propagate the species: it is the fountain-head from which that higher life sprang. After reptilian days fatherhood played an increasingly important rôle, but higher animals such as birds and mammals were possible only because motherhood assumed burdens hitherto left to chance.

With the evolution of monkeys (Primates) that burden had become even more onerous and the responsibility of motherhood correspondingly greater. When Man finally evolved as the highest primate, motherhood had become so responsible that is was a supreme privilege. And nature offered motherhood nothing less than world dominion as the reward for such responsibility.

But what happened—did mothers claim their reward? Man, oblivious to the fact that he had evolved from a monkey through a long line of queens, claimed to rule by divine right. Nature herself recognizes no such right; in fact she ordained otherwise: homage and the crown rightfully belong to woman—for the hand that rocks the cradle was fitted by nature to rule the world.

But note that while *motherhood* is a valuable concept in studying the laws of human development, nature knows nothing of motherhood, for the simple reason that it does not exist in nature. Mothers do exist; and nature recognizes them and works through them.

They are real—they have objective existence and subjective feelings. But as no two mothers are quite alike, and as every mother is a unique personality and has her own individual problems, her problems are also unique.

I cannot solve these problems. No one can.

I speak as a biologist and not as gynecologist, obstetrician, nurse, family physician, health officer, social reformer, moralist, or soothsayer. In other words, I neither prescribe nor proscribe; I merely talk about the most responsible institution in the world of human affairs, and address myself specifically to mothers who may care to know how they may turn their responsibility into power.

The woman is the more responsible party because she, and she alone, incubates the egg—two hundred and eighty days' time out for that; during that time she, and she alone, furnishes the supplies which enable the egg to develop into a normal infant. She, and she alone, nourishes that child through infancy.

As the infant knows nothing at birth, she is naturally its first teacher. What she teaches it becomes the foundation of its individuality, its personality, its character. Which is to say: the child will owe half its *physical* inheritance to its mother; nine months of life; normally and naturally, three years more of life; and normally and naturally, the fundamentals of its education.

Biologic responsibility begins after conception. That fertilized ovum in two hundred and eighty days will increase its weight five million times; a spark of life no larger than the period at the end of this sentence will become a baby of thousands of specialized parts and billions of specialized cells, individually and collectively capable of performing many and varied tricks.

What does nature expect of the mother during these two hundred and eighty days? Nothing out of the normal. All she does, all she can do, may be summed up in two words: protect, nourish.

The nourishment part is not obvious because we deal with a large mystery. That growth capacity I just spoke of is inherent in the one-celled embryo—it divides and becomes two, two divide and become four, four eight, *et cetera*, hundreds, thousands, millions, billions of cells: an eight-pound infant of bones, hair, nails, skin, lungs, heart, nerves, brain, blood-vessels, glands, sense organs, and blood.

What does the mother contribute? Nothing but the raw materials—they are in her blood.

The fetus needs, and for normal growth *must* have, access to normal human blood. In that blood it finds the materials to produce chemical substances so complex as yet to baffle analysis, to carry on physiological processes so complicated as yet to baffle understanding.

Therein lies the mystery—which is nothing less than that of life itself. Not necessarily insoluble, but as yet a mystery. The mystery stops short when, for example, an expectant mother eats nothing from which her alimentary canal can get calcium salts for her blood to give to the growing fetus to make bone and teeth with: in such case the new-born babe will have defective bones and defective tooth germs.

The fetus is a chemical laboratory, so to speak, and it develops its own chemical laboratories, but for two hundred and eighty days it can get its chemicals only from its mother. It is in a sense a parasite; its mother is the host.

Against that background we can quickly examine some popular beliefs. Perhaps I should not say "beliefs." My mother does not believe that a fetus cannot be "marked"—she *knows* that it can, and only today cited several cases as "proofs." "Florence So-and-so ——" (I know her well; she has a large red splotch on one side of her face—a sad disfigurement.) "Well, her father came in one day from butchering and threw a calf's head at her mother's feet, and she threw her hand up to her face!" Q.E.D. For my mother, but not for me.

I can see no possible connection between that calf's head and that marked face. I *can* see how faulty diet can register itself in fetal development. I can see how high fever or even the chemical content of the mother's blood might make for abnormal development. I can see how physical factors could so disrupt the embryo in its early stages that identical twins or any of the freakish forms of twins, such as Siamese, might result from one ovum. But I can see no possible causal connection otherwise.

For example, I can see no possible connection between anything the mother thinks, reads, says, or dreams, and the unborn babe. I can see no possible connection between what she does or what is said to her or thrown at her, and that unborn babe.

I can see how the father can become a hobo, a drunkard, a criminal, or a lunatic; but I can see no way by which such traits can become registered in the offspring. Those "traits" are not transmissible, they are not inherited from either parent. Or, at any rate, I do not see how they can be.

I can see how an alcoholic mother could influence fetal development through the alcohol in her blood. I can see how a father or a mother might have such defective brain structure as to make quite normal behavior impossible, and how such defect might be transmitted. But insanity as that term is usually understood is not a heritable trait—nor is criminality, drunkenness, or unsocial behavior.

I can see no way whereby a mother can bring any influence whatsoever to bear on the mental development, character, or emotional disposition of her unborn child. I can see how any mother can so condition her child that it will likely become a moron, a criminal, or insane, or an insane criminal moron. Believing that, I need not make heredity a catch-all for my ignorance as to why, for instance, a particular party is now in jail.

I believe that all human behavior higher than that of a low monkey is made and not born. In other words, the difference between the mother's influence over her child before and after birth is not the difference between tweedledum and tweedledee, but is the difference between a vacuum and a cyclone, between an idiot and a Charles Darwin, between a flying lemur and a Charles Lindbergh, between a gorilla and a Jack Dempsey.

The mother's responsibility to her prenatal child is simply to be natural. In these days of artificial foods, if she is in doubt as to whether she is putting into her blood all that the child requires, she can easily obtain light. This simple rule may guide her: As her own milk will be the most perfect food her child will ever have, so a quart of cow's milk a day will make almost a perfect food for her, especially if it be supplemented with leafy vegetables.

Corsets and such are of course unknown to nature. So also are midwives, obstetricians, and deadly pain. This does not mean that any woman should be denied anything that science can do to relieve her suffering or make her lot safer and happier.

Reproduction in higher animals is a normal function and should be painless. The evidence seems to show that this is the case among so-called primitive people. The woman stops work or drops out of the line of march for a couple of hours, and resumes her work or the line of march with a baby in her arms or on her back.

This does not prove that labor is painless, but all we know of natural processes seems to justify the inference that it should be. It is so far from that among civilized people that it does not seem possible it ever was the normal condition.

Few women today live the kind of life our ancestors lived and for which their bodies were evolved in due course of time. As a result their muscles are weak, flabby, undeveloped. Childbirth puts an enormous strain on these muscles which have had no previous training; neither the muscles themselves nor the ligaments are in healthy tone. This is especially true among so-called society women—less true today, of course, than a few years ago, but too true even yet.

I know personally two young women who went through their first childbirth without great pain or distress. Both had led active lives since childhood, were accustomed to long walks and to such exercise as comes from tennis and golf. Both continued to lead active lives up to the time of delivery; in fact, one went from a dance to the hospital, and in a few days was as normal as she naturally should be.

Equally significant is the evidence that among so-called savage peoples woman is not the weaker but the stronger, more vigorous sex. She lives longer and can endure more. More boys are born than girls, yet an adult census shows more women than men. This holds good, so far as is known, throughout the human race.

We deliberately coddle women and make it practically impossible for them to be as rugged as boys; they actually become the weaker sex; and then we call them the weaker sex. But nothing that we can find in higher animals or in the human race gives us grounds for inferring that the female is naturally weaker or inferior. On the contrary the fact that nature put the larger burden on her is evidence that nature fitted her to bear it.

No woman not normally physically fit can confidently look forward to normal childbirth. Such fitness means more than just average good health: it means a body so tuned up that all the physiological processes are in apple-pie order. Being in order, they should be able to do their work without greatly interfering with the routine life of the mother.

Much work in recent years has been devoted to discovering just how physical features are inherited. A few solid facts have come to light, but there is still much speculation and much that is not yet known.

It is not yet known, for example, just how far stature is predetermined by heredity, or how far it depends on the proper functioning of the glands of internal secretion and on food and physical environment in general. Many factors are at work; where one stops and others begin is not yet known.

Children of short parents are likely to exceed their parents' stature if reared in a more favorable environment than their parents had. Children of normal parents can be stunted in their growth by disease, faulty or insufficient diet, and by glandular disturbance.

Even the shape of the head is possibly altered by postnatal influences. It is often deliberately altered by artificial pressure to conform to tribal ideas of beauty. But there is no evidence that such alteration has the slightest effect on the efficiency of the brain. Nor has it ever yet been proved that character, intelligence, or capacity in general to behave like a human being, is in any way innately associated with long heads or round heads.

Physically the child will naturally be more or less of a replica of its parents, in certain respects more like one than the other. Why shouldn't it? It is a chip off two old blocks. We should expect it to look like them. Usually it does. But that does not mean that it will behave like them.

"Yes, that's all right," said a positive mother to me one day, "but how"—with great emphasis on the *how*—"are you going to explain to me why it was that my son at the age of six began to spit like his father, who died before my son was born and it was a peculiar habit of his?"

I could only reply that I was not at all certain I could explain such a prodigy, but that I suspected, if the boy were otherwise normal and not too rigorously scrutinized, he had tried out all the fifty-seven varieties of spitting known to boys; when he happened to strike his father's particular variety he was promptly rewarded by his mother with a smile; and that particular form thereafter became his pet way of spitting.

She might also have exclaimed: "Isn't that just like his father!" and the boy had already learned that that meant real commendation. If that father's memory had not been revered, I can conceive how the first time the boy spat that way it would have been the last time—at any rate, in his mother's sight.

In that little story I think we have the mechanism whereby you and I as children may have learned to reproduce the mannerisms of one or other or both our parents. We see these mannerisms, or they come within the range of ways of doing things or saying things that we are trying out; their exhibition on our part calls forth some commendatory remark from a parent or other member of the family.

Just as the child's father was not naturally a hobo, drunkard, criminal, or insane, but took to such abnormal behavior as an easy way out of difficulty, so it is possible that a household with such a father might duplicate the conditions under which he grew up; the child as grown-up would resort to similar unsocial ways.

A mother who has suffered the experience of a drunken husband would, of course, attempt to surround her son with influences which would keep him from becoming a drunkard. She may not succeed, but why she does or does not succeed is a factor of the social environment in that household rather than an irremediable or unalterable factor of inheritance.

So we come to a sharp line, as it were, the line which divides what the mother should do for the child before birth if it is to become a normal new-born, and what she can do to the child after birth that it may develop normally—and this involves the whole process of education.

This new-born may have brought into the world bents or predispositions which will cause it to "take" to one occupation, profession, or line of endeavor, more naturally than to another. I say *may*, but I do not see how it can, and I do not see why it should. All that I know of the nature of human beings leads me to the conviction that within reasonable bounds any normal child can be taught anything.

At any rate, it seems to me that every mother should take this point of view. Therein lies her great responsibility. Because of the artificial life we lead these days it becomes increasingly difficult for mothers to give the time, energy, and patience that the child should have to train it to become an active and valuable member of society.

Within the week I have closely observed two children with their mothers. One is a girl of seven. She is more of a tyrant than Nero ever dreamed of being. She rules one father, one mother, one grandmother, one aunt, and three servants. She really rules; her whim is law.

Then, too, she has been so pampered and coddled physically that the first winter wind blows her over. For two years she has been in the dentist's hands, but all his ingenuity and skill will never be able to make up for jaws which have had no opportunity to develop or for teeth which have had nothing harder to work on than an all-day-sucker.

The boy is of the same age. He is even worse off than the girl, because the world at large will less readily put up with his whims and pettiness than it will with hers. There is no reason why the world should, but the world does. This boy also is a tyrant. He is quite devoid of what we call manners. He has been so pampered, indulged, fondled, and spoiled that the natural manhood we expect to find in a boy of seven has had no chance to develop.

These two youngsters are typical of why thousands and thousands of young men and young women, and middle-aged men and women, and old men and women, fail: they cannot stand on their feet against a gale because they never learned to stand on their feet in a breeze.

You know what the Apostle Paul said about putting away childish things, but did he? The plain fact is that we do not put away childish things. The mother who recognizes the significance of that fact can prepare her boy or girl for the hard knocks of life. The hard knocks do not always or necessarily come, but the point is that if and when they come to children such as I have just mentioned, they have no adequate comeback.

There are thousands of men who literally never learned to get along away from mother's apron strings. Their mothers may be dead, but in every crisis they revert to childish ways, and if it is a real crisis childish ways do not get them ribbons. The results are upsets in business, countless upsets in marriage, and pitiable upsets ending in insanity.

Biologically, the mother is responsible for so bringing up her child that when adolescence comes that child can fly from the nest and start one of its own—and start it on its own economic, social, moral, and physical resources. But the mother who assumes this responsibility wisely must realize that the child learns to walk alone only by walking alone!

This is not an easy thing for the average mother to teach. Her babe is not only all that nature intended it to be; it is all that human society has invented to wrap a baby bunting in.

The mother becomes so emotionally wrought up over her child that it is not easy for her to see it with the naked eye or give it the chance it needs. The consequence is that mothers can, and often literally do, make use of their children to gratify their own whims, vanities, conceits, prejudices, and passions.

Neither mother of the two children I spoke of realizes what she is doing for her child. I suspect that both would be grossly insulted if told that they are spoiling their children because they were not and are not willing to take a stand.

The boy in one case and the girl in the other have become the grand passion of the mother; nothing may come between her and that grand passion. Both mothers are no doubt annoyed and at times much distressed, but when it is a question of retraining these children it comes down to "mother's precious darling," and mother's precious darling knows how to get his or her way.

The ways a baby can learn in six months to get what it wants are nothing short of incredible. The capacity of a year-old boy or girl to rule an entire household is an astounding tribute to the marvelous ingenuity of nature in producing a perfectly dumb animal that can easily learn more wisdom than there is in a bag of snakes or can be found in the entire order of Reptilia.

Those mothers are fairly typical; but they are victims of the high cost of keeping up with the Joneses. They command servants' rooms and a garage, but no nursery; neither boy nor girl has any room, lot, or spot where he or she can manipulate things to the joy of fingers and the delight of eyes.

Both children are hard pushed for natural outlets for the surplus steam which children generate so easily. Each creates artificial outlets for that surplus—does something mother does not like and thereby gets attention. It seems ridiculous, but it is literally true that many a child of six finds it easiest to get mother's attention by doing something which calls for a "Don't!"

The boy especially is "don'ted" fifty times a day—and enjoys it hugely. Left alone in a shed with some soft pine, a saw, hammer, and some nails, he might saw off a finger, but nine fingers would carry him farther on the road to a happy and useful life than the "don'ts" and "Mamma's pets" that are now showered on him all day long.

The punishment should fit the crime and must follow immediately—it then becomes emotionally tied in. A little rap over the knuckles at the proper time will do more to correct deportment than all of father's ragings or mother's tears hours after.

The difference between teaching by order, rote, formula, or advice, and teaching by the child's doing it, is fundamental. Any mother can see that her child learns to bang a rattle over the crib by banging the rattle over the crib.

At first it could only grasp the rattle and rattle it around at random, aimlessly; by and by it learns to whack the rattle on papa's nose. The child learns control over all its muscles in the same way.

By and by it becomes clever with hands and feet and body in general; it can make learned responses to stimuli which strike its eyes, ears, nose, *et cetera.* It learns these complicated movements by repeated tryings-out; by and by they work like habits, they are habits.

Any mother can see how this takes place and can realize how valuable it is to the child to become skilled in the use of motor muscles and voice organ, but she often fails to see that her child's emotional nature likewise gets set in its ways by repetition and that after enough repetition it can get so set that a surgical operation will not remove it. Any normal infant will cry when in pain or when hungry, but suppose the mother, every time she picks it up to look for the pin or nurse it, pets it, and makes a fuss over it. That infant has learned the value of crying, nor will it require much brain to learn to cry for the fondling there is in it.

The two youngsters of my illustration are demanding attention all the time. When they enter a room everybody present must know it. If slamming the door does not suffice, there is a cackle or a whistle or a stamp of feet.

So it is that middle-aged men and women, old men and women, demand attention at every little upset; they must be rocked to sleep, somebody must hold their hands, rub their brows, or feed them the kind of "pap" they learned to depend on to get out of trouble. The tragedy comes, of course, when a husband or wife says, "I'm tired of living with a baby; I'm off!" or when the head of the firm says, "This job needs a man; you're fired!"

It is easier for the average mother to give in to the child than to correct it, easier for her to work her fingers off and become the child's slave than to thwart it or see it cry. She does not realize that she has taught it to cry, she does not realize that she has literally made herself the child's slave. She speaks scornfully of nagging mothers, but the difference between a nagging and a coddling mother is the difference between two ways of spoiling a child.

Many a child's chance for a happy life is sacrificed on the altar of a selfish mother or father who will have her or his way even though the heavens themselves fall on the child's head. A mother often victimizes her child by using fear as a weapon. Harassed by household duties, afternoon tea, or her bridge or language lesson, she has little time to guide the child's activities. She finds fear a mother's friend.

I do not refer to the mother who is afraid of everything, and so rears a child equally timid; I refer to the use of fear as a weapon of control, as a labor- and time-saving device to keep the child out, keep it off, keep it still. She also tells stories to illustrate what happens to bad children and who gets them when they "don't watch out."

The child grows up in an atmosphere of goblins, ghosts, bad men, and devils. And the mother thinks she has done her duty with a comforting caress and a "There, there; mother won't let the bad man get her Little Precious!"

The sex education of the child is enormously important and is generally avoided as though it were the plague. This is not the place for details, but the mother who lies about or evades such matters, or leaves such education to servants or to the street, endangers the child's future. Frankness does not mean forcing matters on the child's attention; it does mean never letting the child's natural curiosity become morbid, shamefaced, or prudish.

Curiosity is natural; the child without curiosity is unnatural—or has learned to keep still to parents about certain matters and look elsewhere to satisfy its curiosity. It soon learns what meets with approval, and governs itself accordingly. If plain or fancy lying buys approval, or wards off wrath, the child readily learns plain or fancy lying or both.

The mother may not know her letters, she may be intellectually flat-footed, but she can so train her child that it will be an eternal joy to her and will command a capital it can draw against till death. But she cannot lay the foundation of that kind of character by deceiving the child, lying to it, or by making a pet or a nuisance of it. No man worth the powder to blow him up ever had that kind of mother.

Mothers do not need rights, they need only use their power: power to educate men to be less brutal, less selfish, less vain; power to educate women to be more valiant, more self-reliant, more independent, more natural. Through their children they can rule their world. Conceivably, if the mothers of the world were to conspire to rear their sons for the profession of peace and decency, fair play and give-and-take, war on earth would become as extinct as dinosaurs.

Suppose women intelligently assumed the responsibility and used all the power nature has put into their hands—what a world this might be!

Assuming, of course, that children continue to be born with all the necessary parts. What parts? What should every new-born have?

CHAPTER III

WHAT SHOULD EVERY NEW-BORN HAVE?

Every new-born babe should have parents to teach it and a social environment to give it a chance—otherwise it will not behave like a human being, for human behavior is made and not born. But every normal new-born is fit to learn, and—generally speaking—can learn anything.

You yourself may be convinced that you could learn anything—or you may not; but I can aid you to analyze yourself with the hope of discovering why, for example, you can't get as many votes as Coolidge, play tennis as well as Helen Wills, write as well as Kathleen Norris, crack jokes as well as Will Rogers, or shed as much light as Thomas Edison.

The babe is potentially a genius or a scoundrel, an ornament to society and a joy to its parents, or an outcast from society and a calamity to its parents. You and I also began as babes, and if we can make an analysis of the forces or factors or mechanisms which collectively conspire to make or break the individual, possibly we can learn why we have made a success or a mess of our lives.

We can make such an analysis, and thereby get understanding; but we never can get certainty. The chemist and the astronomer make fairly accurate predictions because their materials are comparatively simple. There is nothing simple about human behavior, about new-born babes, or about any one of the billions of cells of its living body; in fact, any one living cell is more complex than the sun.

Because of this complexity of new-born babes and of the forces which play upon it, and the ceaseless change taking place in the growing infant, child, youth and adult, our analysis often crumbles to dust in our hands.

We never can know with certainty what a human being will do, because we never can know all that has gone into that human being. A colt bred of horses renowned for generations for fleetness of foot may be fit only for the family phaeton or the doctor's gig—and no horseman or veterinary surgeon knows the cause of its failure to show speed.

The babe may be proclaimed by the doctor "sound as a dollar" and acclaimed by the family as the finest girl ever. And so it seems. It grows normally, perfectly, gloriously, radiantly. And at the age of thirteen this handsome lass enters upon that lunar cycle which normally characterizes woman's life for thirty years or so.

A year later she has the normal figure of a well-developed girl of fourteen, and at seventeen is even more a normal young woman, more beautiful in the eyes of male youth, more interested in their eyes than in those of her own sex.

Romance ahead? No; this is not fiction. This is a true story, a miracle in the olden days, today a "case" in medical science, described by Professor John J. Abel in a bulletin of the Johns Hopkins Hospital. But the case fits my point: human beings are inconceivably complex structures, eternally played upon and molded by incalculably numerous forces; we never can know just what any one human being will do, because we never can know just what any one human being is.

Out of a clear sky this girl of seventeen passed a lunar period. That is not normal. Why had she passed that month? Or the many succeeding months until she was twenty-three years of age? Medical science had no answer. But medical science and her family could see; and this is what they saw: almost a normal young man of twenty-three years!

The change had been gradual, but the net result was that in looks and behavior she was now more young man than young woman. The hair of her head, chin, lips, and cheeks was that of an adult male. Her lower limbs were covered with the short crisp hair often seen in males but never in a normal female. She was as flat-chested as a normal male; masculine too were her large hands and well-muscled arms.

She presented the characteristic shape of a young athlete; and her body in every way was more male than female.

And her behavior otherwise had changed markedly. She had lost interest in male society and preferred that of women. She submitted to examination without the shyness and modesty which might have been expected from a girl of her social class.

She (or he) then began to complain of a pain in her abdomen. An operation revealed a benign tumor in a little gland just above the kidney. Thirty-six days after that tumor was removed she resumed her lunar cycle; her masculine hair fell out and disappeared, her scalp hair was soon replaced by the luxuriant hair of a woman, her breasts redeveloped, and her body in general became entirely feminine again. She was again in every respect a perfectly normal woman.

There are probably a thousand papers and articles on the adrenal gland, and as many on the sex glands, for both are enormously important since the adrenals are necessary for life and the sex glands for immortality. Science thought it knew the main facts of their functions, but this astounding case popped up to take the wind out of their sails; so science tacks again and sails on to discover more about the rôle of adrenal and sex glands in determining human behavior.

Yet there are those who would have foretold that girl's future from a teacup, a pack of cards, or an almanac; or from the shape of her nose or of her ear, or the color of her eyes, or the lines in her hands; or from the previous record of her germ-plasm!

What will her future be now? That is an inscrutable riddle which we may pass up for the more profitable problem of what her future would have been had that tumor developed before the days of antiseptic surgery, or before the days of any surgery at all. Having pondered that, I conclude that every new-born babe should have not only the parts nature allows it, but also an intelligent mother to start it off and an understanding age which will practice at least as much charity as it preaches.

There it is, naked and unashamed, an unknown quantity, incalculably complex, a portentous potentiality for an angel or a skunk. It will be played upon by light from the sun and stars, and by such light as there is in mother's and father's eyes. And while being played upon, it will play back. It will be pushed and pulled, smiled and frowned upon, rewarded and punished, knocked down and picked up again; and it always will respond with such responses as it knows.

Some of these responses are innate, unlearned, unconditioned; some are acquired, learned, conditioned. Some are obvious, for we can see the flushed cheek, the moist eye, the curled lips, and movements in motor mechanism and voice organ; some cannot be seen, for they are made by organs within the body. But eternally responding, never still so long as heart beats and lungs rise and fall; action and reaction, somewhere, ceaselessly. Normal parts make for normal growth and development, thereby making normal action and behavior easy. A living concern, a going concern.

But for how long; where?

It *should* have a teacher and a chance. What *must* it have to live, what must it have to be normal—to fit it to learn to improve its chances? The first question is easy; the second, as we have seen, is open for discussion. But we shall do no violence to the infant's anatomy if we speak of its *living* parts and its *learning* parts; nor shall we lower its nature if we say that it knows how to live, but does not know what to live for.

These "parts" have changed little, if any, in fifty thousand years, and are common to all new-borns regardless of color of skin, hair, or eyes, stature, shape of head, eyes, nose, or ears, contour of face, shape or size of hands or feet or fingers or toes.

The *living* parts are viscera, *vital* organs; the processes whereby life is maintained are fundamentally the same in all animals from amœba to man. The new-born's heart beats, its lungs begin to rise and fall. Its alimentary canal tears food apart, releasing the energy necessary for living and the building blocks necessary for growing. Nerves connect the organs behind these vital processes, and glands regulate the amounts and disposition of energy and building material.

Nothing new in all this, of course; everybody knows it. Well, everybody once knew that the earth was flat, but nobody knew how to walk off it. It is the same old earth; we fly around it now. Same old viscera. When they stop delivering fuel and building material, we die. What is death? A vital organ has quit. The new-born may live out its fourscore years and ten, and at death be no more *human* than at the hour it was born; fortunately, it rarely lives more than a few months unless it has something to live for. What you and I have to live for is what marks the difference between the behavior of single-celled amœba and man.

It is the "to live for" that gives new meaning to our vitals. Our viscera have not changed in a thousand generations. But since the day that our ancestor kindled the first fire, a vast universe has fallen under human eyes into human hands. Result: one man's word can speed up a million human hearts, one man's flight set the world cheering, one man's death plunge nations into war.

What will our new-born babe live for? This brings us to the *learning* parts. We need not list them, for it is the baby itself that learns. Through its sense organs—eyes, ears, nose, *et cetera*—it will learn *sense,* and thereby learn how to respond with its hands and feet and voice and glands and other organs.

But the fundamental and vital responses are not learned. Nor does the infant have to learn to be moved—pain will move it, as will hunger, a thunderclap, restraint of its arms, or gentle, soothing rubbing of its body. If it could not be moved it would not be fit to learn.

Emotion will tell it when to move—that is what emotion is for, that is what it means. The babe moves with legs and trunk and arms—in general, with striped muscles working bony levers; and with speech organ. Without emotion it would never move hand or foot.

The emotional part is the vital part, viscera. Viscera are mainly muscles, but are unstriped or "smooth." They work on a nervous system of their own, but they can of course communicate with the brain, and through brain, with hands and feet and voice; and they can get messages through the brain from eyes, ears, nose, tongue, and fingers. Otherwise that new-born could not learn to say, "I've got the stomachache," or learn to cry for candy or scream at the sight of a mouse.

It learns to make "appropriate" responses to the fundamental emotions of hunger, fear, anger, love, pain, and pressure. The responses will be made by striped muscle organs. How many emotions? I do not know. The main point is that you or I, as that child's trainer, can teach these emotions human tricks.

What it sees, what it hears, what it smells, what it tastes and what it feels—and, of course, what it reads and what it thinks—will come to move it this way or that—to sleep or to smile, cry, shout, scream, pout, frown, nod, snort, run, jump, hide, blush, blink, dodge, fight, reach for, tear up, pull down, rebuild, build anew, eat it, drink it, possess it, kill it.

If I seem to lay undue emphasis on these emotional factors, may I remind you that nature has not slighted them? We slight them at the peril of our lives. We neglect to train children in sound emotional habits, and then wonder why, as grown-ups, they become moral perverts, social nuisances and economic wasters—and charge them to the account of defective heredity when we should charge them to our own neglect or ignorance. Let me say again, human behavior is made and not born.

All human attributes covered by such terms as wisdom, intelligence, decency, fair play, self-reliance, shrewdness, miserliness, and selfishness. are made and not born. Any normal new-born is potentially self-reliant, for example, but the degree of self-reliance it will attain depends on how well it has learned to rely on itself. It has a gland that will release "pep," but will it use its adrenalin to fight its way out or to flee from trouble? If for fighting, will it use its fists blindly; and if for fleeing, will it use its legs blindly? Or will it use its head also, and fight like a champion or flee with discretion?

Before that babe is very many years old it has taken on "personality." It begins to have more or less definite aims in life; its answer to each critical moment is in keeping with those aims; each crisis is for it a unique event because it is a unique personality.

What is your aim in life? What do you live for? What, for example, does death mean to you—death of parent, child, mate, friend? What influence has Christ's death had on your life, or the death of Napoleon, Lincoln, McKinley, Harding, or the Austrian Crown Prince? I do not recall that any death ever moved me more than Smike's—and Smike only lived in the pages of *Nicholas Nickleby*. Possibly most of us live for an ideal which is little nearer reality than the printed page.

What makes your heart beat faster? Why don't you get more work than sweat out of a lump of sugar? Why do you lay up fat on earth when you might spend it on a hungry child?

To which you reply, "Don't be so personal." But life is personal—especially in human beings. Each one of us is a person, each one has a personality. That personality is a *growth,* is never the same for two consecutive days; it changes, sometimes greatly, often rapidly; it may be changed by a word, a look, a book, a misstep. You went in for something; it does not now interest you. You had certain aims in life; you now have other aims—as had the "case" when she changed her sex.

I show you a dead cat, a live rat, an American flag, a Bolshevik, the Prince of Wales, a royal flush, a cannon cracker, and a pumpkin pie. Or I turn on the radio and give you "Lead, kindly Light," Lincoln's Gettysburg address, a Chinese orchestra, "Dixie," "*Die Wacht am Rhein,*" and

"Yes, We Have No Bananas." What are your reactions to these sights and sounds? Which of them make you smile, weep, hold your nose or your ears, jump, want to fight, eat, dance, cheer? Born that way?

Certainly not. And what is more, your reaction to any sight or sound named above does not necessarily remain constant. You yourself change, can be changed. Does your mouth water when you see a pumpkin pie, or your eye water when you hear "Lead, kindly Light"? I can teach your eye, if you are not too old to learn, to shed tears at the sight of a pumpkin pie, and your mouth to water when you hear "Lead, kindly Light."

Your lacrimal gland may be larger than mine, but unless I am a freak my lacrimal gland is large enough to wash my eye. Your brain may be larger than mine, but unless I was born an idiot, or have suffered any one of the many things which might impair my brain, it is still large enough to enable me to learn to shed tears on any appropriate occasion. We only use about one-tenth of our brain, anyway.

The rub is in the "appropriate." A certain sight or sound provokes you to tears; you look at my dry eyes and denounce me as a hard-hearted wretch. And if I happen to be an Australian and we do not cry at the things which move you to tears, you say that Australian blacks have no sentiment; or if Will Rogers' jokes leave us cold, you say we have no sense of humor; or if we go in for mixed bathing *au naturel*, we have no sense of modesty.

Extreme cases—and therefore more to the point, which is: Given the necessary parts for life and the necessary parts for learning to live, any new-born babe, regardless of color or previous condition or servitude of parents, will live and learn. How long will it live? What will it learn?

The first question cannot here be answered specifically—

the causes of death are so numerous, the laws of health so complex. One example will suffice. I recently lost a friend who died from the result of infection in a wisdom tooth which had never erupted. He was forty-seven years old; that tooth should have erupted before he was twenty-five.

We speak of the tooth as the "cause" of his death, but he might have lived for years: if he had inherited powerful jaws and teeth—as do native Australians; if he had had that tooth cut out five years earlier; if his father had let him cut his teeth on his shoe instead of on an all-day-sucker; or if his mother had paid more attention to her diet during her prenatal period and given him blood from which he could get the calcium salts, silicon, and fluorine necessary for laying down the foundation for a sound denture.

These "ifs" do not even scratch the surface, but they may suggest the complexity of our problem and drive home the fact that you and I and the rest of us began our individual existence as a fertilized ovum which could grow into a normal new-born only under certain physical and chemical conditions. A new-born with two hundred and eighty days of abnormal conditions behind it hardly can be expected to have a full set of parts all in fine healthy working order.

Some of these parts will be expected to secrete substances so complex as to defy scientific analysis. Those chemical laboratories of the new-born babe are possibly a thousand years smarter than our chemists—and chemists are a thousand times smarter than they were a century ago. Now, secretions alone do not make or break us—there is more to us than glands—but normal life, normal growth, and normal behavior depend, among other things, on the normal functioning of millions of glands in general and a half-dozen glands in particular.

Our country declares war, and you and I, bursting with patriotism and yearning for glory, offer to go over the top. But you are too tall and I am too short because a little chemical factory in the center of our heads did not turn out orders for you to stop growing when you were tall enough, and ordered me to stop growing before I was tall enough.

You offer yourself to an ambulance corps. The recruiting officer drops a book on the floor and you jump as though you were shot—and are rejected promptly; your chemical laboratory for the manufacture of "pep" would soon wear itself out keeping you keyed up to run for your life. I apply to the same officer, and by a simple test he finds out that I could not run a mile to save my country itself; my chemical laboratory for energy storage has failed.

Suppose I have diabetes, can I charge that up to inheritance? Did I inherit a liver which was destined to fail in one of its functions after a certain number of years' usage? Or have I acquired diabetes through misuse of my liver? Just why am I now a diabetic? No one yet knows.

But suppose that I am. I begin to lose flesh and strength, although I eat and drink more than ever. I go to a doctor. "Diabetes." What do I do then? Walk out of his office with a heavy heart, go home to break the sad news of my impending death, and call in a lawyer and will a million to a medical school, thereby becoming a Rockefeller? Or do I grit my teeth, say nothing about it, and in the few remaining months of my life, discover insulin, thereby becoming a Banting? Or do I walk out with a bottle of pills rattling in my pocket and a course of dietetics ringing in my ears?

It is not that I have diabetes, it is *when* I have it. A few years ago it was one disease; now it is another. It would have killed me then; it might be the only thing that would make me now.

Apply that principle to any problem of your own behavior if you would draw the line more sharply between what you could and could not, between what you can and cannot. In the land of the blind the one-eyed man *is* king.

Can the native Australian's mouth water as fast as yours, can he shed as many tears in a minute as you can? Are his senses naturally as acute as yours? No one has yet proved the contrary—and many have tried. In cold fact, no one has yet proved that capacity to do this or that, learn this or that, or behave this or that way, varies among races or inheres in any one physical race, type, or feature more or less than in any other.

Make no mistake about this—nor overlook its significance. All the so-called intelligence tests have as yet proved no innate connection between any particular form of human behavior and any particular form of skull, color of skin, shape of eye, or any physical feature.

Differences, yes. There are no two human beings quite alike, there never have been, and presumably never will be. But, I again insist, no one yet has proved that your learning parts were innately better fitted for learning than the Australian's.

Yet we constantly are told that the preamble to our Constitution is a joke, that men are *not* created free and equal, that there *is* inherent virtue in pale faces and long heads, and that gentlemen who prefer blondes are potential fathers of superior people. We must look further into this matter.

Is there any fire behind this smoke? If not, why so much smoke? Are the Nordics *the* people? Or are we human beings equally fit? Do we all start equal? And if not, who or what loads the dice against us? If some of us were handicapped from birth, we want to know so that we may set our faces accordingly. If we were not handicapped, who or what slowed us up, why don't we win more races?

So-and-so is digging deep footprints in the sands of time; all I can do is stub my toe. Why can't I leave any footprints? And if I can only stub my toe, if I can't dent any kind of success, if I am a failure, was I born that way, and if so, shall I pass my stumbling gait on to another generation or surrender my procreation rights to surer-footed performers?

I know your answer. If I stumble across your path and slow you up, you probably would want me locked up so tight that my strain would die with me. And that, in general, has been man's answer to the biggest question in the world.

Let us suppose a case. I am short of stature, round-headed, big-eared, flat-nosed, black-haired, oblique-eyed, thick-lipped, and long-armed—in which respects I differ from you. What in general is your attitude toward me and my kind? Is it not something like this:

"I have my doubts about you. As for myself, I have no doubt. I am well born; my blood is pure, my brains are large and good. I was born with great intellectual talents; I may have done nothing remarkable, but I was born with talents—I have the stuff in me. Nothing the matter with my family; it is fit to populate the earth. In fact, no family is fitter, few families are as fit, and millions of families are so unfit they should be pasteurized or the human race will sour and the earth itself will become one big smearcase."

That answer is behind most of the history you and I read in school, and in one form or another can be met daily in most of the people we know. I have met it in a thousand forms around the world, but rarely so explicitly as Tom McKinley put it nearly forty years ago in Peru.

Tom dropped down on me out of a sandstorm while I was digging mummies at Ancon. He was white as a sheet from malaria and bearded like the pard. He was a Nutmeg Yankee and—though I did not know it at the time—a deserter from a United States man-of-war to escape prison for nearly having killed an officer. He was "broke," and as I was finding mummies faster than I could pack them, I hired him.

We were discussing Peru. "Peru ain't so bad," says Tom. "It's the people—they're no good! If we could kill off all the men and use the women to start a new race, Peru would be all right."

For "Tom" insert the next man you meet and the entire Eugenics school. That school says: "It's blood that tells"; and adds by implication, "Ours is the blood." They are no more modest than Tom's "If we . . ." and their literature is propaganda for the idea that We Are the People!

Well, we are the people; only the blind cannot see it and the perverse will not admit it. But why? *Why* are we the people? Is it because "we" are Nordic, Anglo-Saxon, Aryan, white? If so, special virtue and superior fitness must inhere in Nordic, Anglo-Saxon, *et cetera.*

Now, as a cross between Anglo-Saxon and Irish I should like to claim a fifty-per-cent share in that blown-in-the-bottle virtue—but as an ethnologist I cannot believe in it. All I have learned forces me to infer that there is no innate connection between Eskimo and Eskimo pie, Mohammed and the Koran, copper tools and native Americans, iron tools and native Africans, Hindus and sacred cattle, or Zulus and cowhide, between the First Families of Virginia and slavery or the First Families of Massachusetts and rum, and between Anglo-Saxons and the edge on the world.

I know of no ethnologist or biologist who does believe in such innate connections; they hold, on the contrary, that such connections can be answered in terms of fitness of new-born babes to learn and capacity of adults to invent new ways to meet new conditions and their proneness to beg, borrow, or steal any ways they want. That is why ethnology is not so popular as eugenics in some of our best families. Ethnology is not propaganda for "my family," right or wrong.

Cut across human history where you will, cut across any given personality at any given moment: history and personality are not explicable in terms of special fitness; they are explicable in terms of time, place, and opportunity.

Heredity counts, of course. But against every example I could cite of innate connection between performance and physical inheritance, I would cite all human history as evidence that social, cultural, and physical environmental factors set the stage for every human act. Man became human not because he was born that way, but because he learned to act like a human being. The first years were the hardest. It probably took him fifty thousand years to learn to talk; you learn in a few months; you can learn more words in ten years than the cave-man had in his dictionary. But we never have been able to paint a better buffalo than he could.

Why, then, you may ask, hasn't the Australian black invented a flying machine? Well, did *you* invent one? Didn't you sneer at Langley when he invented one, and yell "I told you so!" when his invention crashed? Why didn't Miles Standish invent an airplane? Or Columbus? I do not know that the Australian black cannot invent an airplane; I think I know why he has not done so.

Our fathers busied themselves telling us what the Japanese *couldn't* do. We suspect now that an oblique eye need not take an oblique slant on life, and that there is no inherent connection between a Roman nose and a Roman character. We have no grounds for believing that a blue eye can see more than a black one; or that a man's character can be read more easily by his nose than by his handkerchief. I cannot conceivably associate any form of nose with any predisposition to any particular form of activity or amount of ability. Some people can and do. I can account for that fact—as I can account for the fact that they believe in dreams. Their ancestors were equally positive that they knew witches when they saw them and knew no reason why they should not burn them.

From what I know of the history of the other features of our face, I am equally stumped to find a reason for believing that because I can wiggle my ears I am any less "ascended" than you are, or that my germ-plasm is any less capable of begetting genius—though I do recall that my son, at the age of five, offered to bet me a dollar he never would be President. Probably Coolidge himself would have given as liberal odds up to July 4, 1923.

I do not mean, of course, to imply that chance or luck is the decisive factor. Fortuitous circumstance does play a part in our lives, often a big part. We may be all set for the big scene—and a baby begins to cry, somebody sneezes, some overworked scene-shifter drops the curtain, a fuse blows out, we burst a button, or our corn begins to hurt. Accidents do happen. But if, as I maintain, any normal new-born can learn anything, it can learn facility, composure, nimble wit, cool-headedness. Our big part may be ruined—there are other stages; our big fish may get away—there are bigger ones in the sea, or we may turn to bigger game; we may lose our legs—and develop our arms.

Possibly you recall Billy—or was it Harry?—Tripp of Barnum's? Armless from birth, he made a good living with his feet. I used to have his autographed photograph.

You probably have paid no attention to Billy Tripp; you want to know where I get the courage to maintain that any normal new-born can be taught "anything." Anything is a bit sweeping, but what is your evidence that it cannot?

Time limits us, of course. A ray of light cannot get to

Saturn and back in less than ten minutes. We cannot travel nearly so fast and we have only a few years for traveling, and must stop to eat and sleep. But the big limiting factor is not time, or time out for eating and sleeping, or inheritance, or span of life; it is the kind of habits that slow us down to a standstill, and the opportunity that knocks when there is nobody at home.

What a world there is behind that one word habit! If you would get close to human nature, forget all you ever have heard about instincts and throw away your notions about natural bents and predispositions and innate talents and "blood," because man is not that kind of animal. He is a creature of habits—and a few bad ones can ruin him for life. Look into habits—find out how they start, how they are formed, how they end, how they may be broken; and why some are good and some simply ruinous. Note especially how emotional habits eternally move us this way and that. And before you decide that this boy or that woman never was fitted for this or that rôle, remember that any one of a dozen bad emotional habits may make success impossible in almost any direction. These habits were made, not born.

Emotional habits; motor and speech habits. Living parts, inherently wise, knowing how to swallow food, digest food, *et cetera;* but not knowing how to pick out food, select a mate, or whether to frown or applaud when the band plays "Dixie." Through the sense organs, by experiment, the living parts will learn what is what in foods, mates, and songs, and the motor and speech organs will learn by usage how and when to eat with knife and fork or chop-sticks, how and when to say "I love you," and how to whistle to keep up courage.

Learn, learn, learn; habit, habit, habit. Smart person and bundle of habits. But if the predominating habits are courage, directness, sincerity, frankness, self-reliance, and regard for others' rights, the possessor will be endowed richly by nurture to profit from nature's birthright. I make no pretense to "mind"-reading or "character"-analyzing, but if I had to predict the future of a five-year-old boy or girl I think I could get more insight from a day with the mother than I could from the family stud book even if it went back to William the Conqueror.

It is the mother that primarily and generally invests the infant's fund of potentiality. Invested wisely, that potentiality will carry the individual over the top when the bugle blows. When you hear a man say that he owes all to his mother, take his word for it. But when you hear a mother say, "It's in the blood," smile at her credulity. The prenatal infant makes its own blood; it no more inherits its mother's blood than it inherits her love for music, fear of snakes, and hatred of bobbed hair. The infant inherits parts that can learn to go; what they will go for largely depends on the lessons learned at mother's knee.

The "mother" may be a black mammy or a bottle in an aunt's hands, but as a rule the entire family puts its hand to the wheel. Father pushes, mother pulls. Uncles and aunts have ways of their own, and push or pull accordingly. Grandparents are privileged characters, and their whims must be humored. Governess and nurse have ideas. Brothers and sisters also like to experiment with babies. And you and I and society at large have our say and back it up with rewards and punishments. So many cooks to spoil that baby's broth, so many wise-acres to help it invest its inborn curiosity to learn and its innate proneness to explore!

There is no doubt about it. But these socially conditioning agencies are so numerous, their influence to mold personality is so subtle and depends on so many factors of varying degrees of complexity, that it is far easier to set everything down to heredity and let it go at that. Not only easier, but more soothing to family pride—for, as I have pointed out, I can excuse my failure in life with an "Oh, well, I *could;* but I've had some bad breaks." For "breaks" read "habits" —especially the habit of mumbling, fumbling, jumbling at every bad break instead of looking into it with cool eyes and so repairing it with clever hands that it will break right the next time. Such are the habits of the good man you can't keep down—that is what makes him good.

There should be a fuller understanding of the nature of the raw materials in every new-born babe. Nature, a hundred million years, are behind these materials. They are marvelously fitted to live and learn; so teachable that thousands of men had ceased to be animals a hundred thousand years ago, so ignorant that there are thousands of men today who are still animals—not because they were not well born, but because they were not well trained.

It is not life that is marvelous; it is nature. Nature knows what every new-born babe should be equipped with—and spent millions of years perfecting its home. Babies still have parents, but homes now are flats and the nursery has given way to the garage. Get that new-born babe back to nature! And then make certain you understand how it learns and what it learns with. As an aid to such understanding let us now inquire how you got your ways.

CHAPTER IV

HOW DO YOU GET THAT WAY?

THE lion jumps through a hoop of fire, the seal juggles a ball on its nose, and the dog stands on its hind legs. They were not born that way. Somebody taught them. They learned. You sit in a chair, hold a magazine, read English. You were not born that way. Somebody taught you. You learned. There is nothing mysterious about it. How else *could* you get that way?

You learn to sit in a chair, hold a magazine, and read English so well that you do it for hours without effort. Transport a Japanese on a magic carpet from the heart of Japan, and seat him in a chair; he is awkward, and soon very tired. Hundreds of millions of people never learn to sit in chairs, turn the pages of a magazine, or read English. Could they learn? Why not? Could you learn to wear a kimono, sit on the floor, and read Japanese? Of course you could. Any normal person can learn to do practically anything within reason.

There is, of course, a vast difference between what you *could* have learned and what you *did* learn; between what you are today and what you could or can be. If this were not so, you and I might just as well spend no more time on How Do You Get That Way? And if I can show you how you got the way you are, what is to keep you from learning how to get any other way you want to get—within certain limitations? Nothing—save a lack of enough motive power within yourself!

With a frail body you cannot learn to become a heavyweight champion. Sex sets its limitations, especially if you are a female. Society says that certain things are unwomanly, and puts obstacles in the way of your learning them. But, even so, obstacles can be removed. You don't *have* to accept limitations set by others. If women had accepted the limitations set by men in the past centuries, what a world this would be! Fortunately, limitations can be widened out.

However, let's look into this matter of "limitations" a little further. It is important that you understand just what I mean.

You may be marvelously fitted by training for a certain job—but, does that job *want* you? For example, you are admirably qualified to teach gymnastics in a girls' school. Let us suppose that I have a girls' school and require a gym teacher. You show me your credentials and exhibit your skill. I like your looks. I think you would make a fine addition to my school. Then I say, "By the way, what is your religion?"

"Methodist."

"U-mm! That's too bad. You see, this is a Baptist school, and I have only Baptist teachers."

"But what has religion got to do with teaching gymnastics?"

"You have me stumped! But business is business, and some of my patrons are fussy, and with you on my faculty I can no longer say: 'Entire faculty Baptist.' "

Seems absurd, doesn't it? But this society in which you and I live does sometimes take absurd attitudes. What and how many doors have been closed because of the color of one's skin, or the way one's feet were shod, or the way one handled a knife and fork, or, or, or, or . . . ?

You may know the job, like the job—and fail to get it or hold it, because you rub something or somebody the wrong way in some trifling, piffling thing. It is a human being who hires and fires, promotes and demotes. Or a committee, or a board of trustees, or an electorate. No matter how small or big the job, there is always the human equation back of the hiring and firing line. And you know what human beings can do to you!

You may be able to climb a rope one hundred feet long—but not if that rope runs through a cement ceiling only ten feet above your head. We all have our limiting factors. It is well that we should know which are due to inborn physical traits, which to lack of training or desire, which to mere incidence of environment. Some of these limiting factors cannot be altered—but most of what usually seem to be limiting factors can be altered, if you want badly enough to alter them.

As a matter of fact, much that is glorious in human history has been done by those who transcended their physical or social limitations. Take Napoleon, Florence Nightingale, Lincoln, Steinmetz, Charles W. Eliot. What didn't they do! What limitations didn't they crash through and smash to smithereens. Even old age can renew its youth, and learn like a child, if it wants to.

Beware of all those who may say to you: "*This* way is closed to you;" or, "You cannot get *that* way." You can put them in the class with those who said that the world is flat, that steel ships are impossible, that flying is an absurdity, and what not.

In answering the question, "How do you get that way?" I mean just now by "you," your physical body; by "way"

I mean the things you do—how you act when you are alone, or with friends, or with strangers, or with a mob; how you work or play; how you face danger, or a fight, or the loss of your job; how you behave when you are in love or in disgrace; your ways of talking, thinking, reading, walking, eating, dressing, sleeping; your ways at home, at church, at a ball game, in an office or the dentist's chair.

You have one physical body—you inherited it; call it your capital. You have thousands of ways—you learned them; call them your investment.

Are you getting as much out of your ways as you would like? If not, quarrel with your ways and not with your body. You cannot change your body to any considerable extent, but you *can* change your ways. You can reinvest your inheritance in more profitable ways. As a matter of fact, that is what you do every time you rise in the world.

There is no rung in the ladder of achievement you cannot aspire to. Nothing that anyone has ever done is beyond your capacity—within limitations.

All right, you say; then, how about becoming a genius?

Well, why not? Do you know what genius is?

Disabuse your mind of one thing: geniuses are not made of sweat. Can you imagine Henry Ford in a sweat? Or Thomas Edison? Or William Shakespeare? Or Paderewski? The sugar that geniuses burn goes into *work*—directed work—and not into sweat. They work their energy off, they do not sweat it out. There is a big physiological principle involved here which I cannot go into, but the principle is real—and it is at the bottom of the business of being "great," of being a genius.

We call Shakespeare a genius, and yet he excited little comment among his contemporaries. He now looms up because everybody around him has been washed out. We have not time to read everybody, or energy enough to love everybody. We unite on somebody—because we simply must read somebody and love somebody—that's mob psychology; that's why and how we elect a President.

To achieve mightily, to go far in this or that direction, to be a genius, means fine organization of the particular mechanism with which is to be achieved the kind of success you want, and then the direction of the entire resources of the body toward that achievement. There is such a thing as "putting more than you have" into your job. And when all one has is put into anything long enough, something happens: a Henry Ford, a Thomas Edison, a Paderewski, or a Lincoln. This sounds very simple, but it isn't. The interests of the average human being are very diversified, and he prefers to keep them so. Tell him that, in order to be a "genius" along a certain line, he must bend *all* his energies and time to that effort, and he says, "Aw, let me be an ordinary chap."

Of course, bodily deficiencies or peculiarities may open or close certain roads to you; they may become the factors which will determine the way you will invest your inheritance. Your fingers, for example, may be so short and chubby that you cannot become a skillful pianist—as piano keyboards are made. But with a keyboard *made* for your fingers, there is nothing in your inheritance to prevent your rivaling the greatest of pianists, provided, *always provided,* you want to devote yourself single-mindedly to that end.

But let us return for a moment to your inheritance. Now, I want you to note closely what you did inherit. The color of your skin, hair, and eyes; your stature, size and shape of head, relative lengths of arms, legs, and trunk, size and shape of nose, and facial features in general—you got from your ancestors. What else did you inherit? A unique body. How could it be otherwise, when your body has more parts than have all the man-made machines rolled into one, more units than this earth has had human beings?

What else did you have at birth? You had the immeasurable capacity to learn. That was your real birthright, your invaluable inheritance. And how that birthright was invested by your parents and you determines what you are today.

Think of your body at birth as a mechanism that knew nothing, that was densely ignorant, but could learn. How much "personality" did you have? So little that if you had been mixed up with a hundred other new-borns in the maternity hospital, your own mother could not have picked you out. Now you have so much personality that she can pick you out from a thousand million—by the tone of your voice, your smile, your walk, by a hundred mannerisms which belong to you and to you alone. What, then, was the nature of this mechanism so devoid of personality, so capable of acquiring marked personality? What did that mechanism originally know?

It knew how to live—but only under livable conditions. It required food and air, protection from extremes of heat and cold and from stimuli in excess of what that mechanism could stand.

Your mechanism engine at birth was set to go, but it did not know where to go or what to do when it got there. Human hands fed it, protected it, carried it about. They had to, or you would have died. Your motor mechanism, by which you now carry your engine about, and your voice mechanism, by which you now talk to others and to yourself, did not know how to feed you, or protect you, or carry you about, or tell others to do it for you.

With your motor mechanism you could squirm, with your voice mechanism you could cry and make rambling sounds.

Nothing more. But you could and did learn to use your motor and your voice mechanisms.

Why did those little motor and voice mechansims want to learn anything? What drove them? The engine! Or, in other words, the impulse to live. The drive, the vitality, the vigor of life originate in the engine.

Let us call the engine the visceral drive, and understand that viscera include alimentary canal and organs of digestion, respiratory and circulatory systems, and organs of elimination and of sex. And note that when the viscera do their work well, energy is released for action in motor and voice mechanisms.

Now see how these two mechanisms learn their lessons: Your "motor mechanism" works through the action of muscles on bones. It learns to act in innumerable ways. For convenience call them your manual ways.

What was your hand good for the day you were born?

Look at the tiny hands and frail arms of a new-born: they cannot hold a bottle, they cannot even reach for a bottle. Soon the babe begins to make random movements. By and by it learns to hold a bottle, to find its toes, to reach out for things. It reaches out to a lighted candle; it is burned. It has learned a trick in one lesson that it is not likely to forget. You learn by experience those things which hurt or teach. Experiences, emotionally reinforced—as in pain, anger, fear, or love—get their lesson across in short time; they are burned in, as we say. You needed but one lesson to learn that fire is hot, that tails are not handles for lifting cats, or that father's pipe is no all-day-sucker.

What did you not learn to do with your hands? Within three years you had learned thousands of ways of using them. And as you grew older, they became extraordinarily versatile—whittling wood, wielding a knife and fork, playing ball, chopping wood, writing, drawing, and the hundred and one things with which a normal child fills up his time.

Many of these movements are enormously difficult; you did not learn them in one lesson, or become proficient at them in twenty. Some required years of practice; some were easily learned because you had already learned most of the movements. Having learned to bang your rattle on the crib, for instance, you had made a good start in learning to drive a nail. Or, maybe you became unusually "handy" because the people with whom you lived were "handy." In other words, you came by your "handiness" naturally.

You learned to walk on your feet. Can you wash your face, comb your hair, and blow your nose with your feet? Or thread a needle, eat with knife and fork, play a violin with them? Children born without arms can learn to do these and other equally difficult feats. Children of Japanese artisans learn to use their feet as helpers for their hands, and become extraordinarily proficient in the use of their toes.

Can you make an arrow head? Can you make fire with two sticks? Can you shin up a tree? Can you walk a tight-rope? Can you skate? Can you dance the Charleston? Can you conjure rabbits from a plug hat? Can you juggle seven kinds of things at one time?

To one question you say, "Yes," to another, "No." Why "Yes" to this and "No" to that? "I learned this. I didn't learn that. I never tried to make an arrow head, or fire with two sticks, or juggle, or walk a tight-rope. I never learned to skate on ice, because I grew up in Florida. I can't dance the Charleston—or any other kind of dance; my parents wouldn't let me learn."

You learned thousands of complicated bodily movements. You trained your motor mechanism to fit you for your walk in life. But your "walk" in life was not predetermined the day you were born. Let us say you are a carpenter. You were not destined to be a carpenter when you were born, and you don't have to remain one if you don't wish to.

While you were growing up, your motor mechanism could have learned *anything* anyone has ever done with a normal body. The specific ways into which you organized your manual behavior depended upon the specific patterns set for you by the home, school, and society in which you were trained.

These may not be the ways you now desire; but, lacking understanding by your parents, or without any definite goal of your own to determine your course of action, you took the path of least resistance and responded to your environment. But you don't have to remain what you are today just because you've been trained that way.

At the same time that you were learning to use your motor mechanism for specific purposes and in specific ways, you were also learning to use your voice mechanism. You learned to talk. What language? English, the language of your parents, of the human beings who brought you up. You could just as easily have learned Chinese, or Choctaw; all languages sound alike to the new-born.

By the time you left school you had not only learned to speak English but to think in English. You knew several thousand words. You knew their meanings and you had acquired ways or habits of using them. You learned to respond to words and to situations with words. By the age of ten, you could cross Asia with Marco Polo, the seas with Magellan, the Alps with Napoleon—with words. You could explore the world, conquer the world—with words.

You did not always speak the words: you learned to speak them to yourself, to think them and see them. If you got in the habit of doing great things only with words and doing little things with your motor mechanism, you became a day-dreamer and built your castles in the air. It will not be easy for you to abandon these "thinking habits" for "doing habits," and convert your longings into realities. You may *think* the most glorious story ever conceived—it is what gets into the film, or on to the printed page, or into action that counts. The ways you have organized your verbalized behavior form part of your personality.

Meanwhile, you were also learning specific emotional habits—to fear, to hate, and to love—and you were organizing them into emotional behavior.

Now, it is important that hunger, pain, fear, anger, love, should move you. They are enormously useful emotions. Without hunger you would not eat, and without food you die. Without love you would not mate, and your strain would die with you. And unless you can be moved by fear or anger you cannot flee or fight for your life. These emotions move you; that is why they are called emotions.

And the collar-buttonish things that can send you into a towering rage, or scare you out of your boots! A clock enrages you because it will not stop cuckooing; you throw a shoe at it. A mirror enrages you because it reflects a distorted countenance; you are afraid to smash it!

Afraid! What or whom were you afraid of at birth? You had an inherited fear response to just two situations: a loud noise; falling or being dropped. A flash of lightning did not scare you; a clap of thunder did. By and by the mere flash scared you and made you jump, even though you could not hear the thunder. The banging of a door scared you. Your fears became specific; conditioned fears, they are called.

Who or what made you mad when you were a babe? But why should a babe be angry at anybody or anything—it has loving parents to care for it until it can learn to distinguish friend from foe? But suppose its parents were not loving, suppose they resented another mouth to feed. Well, you certainly knew nothing about this at birth; you could not distinguish your father from the physician, or your mother from your nurse. If your nurse fondled you and your mother pinched you, you learned to love your nurse and hate your mother.

You squirmed with anger when your limbs were pinioned and your movements restrained. And why not?

Your inborn capacity to rage at restraint, to fear noises and falls and to love the hand that fed and fondled you, developed into an individual repertoire of specific likes and dislikes, fears and hates, disgusts and aversions. You learned them—as a child almost unconsciously. They became your emotional habits, and formed your attitudes and conditioned you for or against thousands of persons, things, situations, words, phrases, nations, times—yes, and life and death.

You probably started to school when you were six years old. What had you been doing up to that sixth year? Unless you understand the significance of those pre-school years, you fail to get the big idea of this article. Our forbears knew the idea, and expressed it cleverly in the adage: "As the twig is bent the tree is inclined." What they did not know was just how true that adage is, and all the misery and misunderstanding that follow from it. They went on bending twigs "in the way they ought to grow"; that is, like themselves.

The world into which children were born kept changing; but children were still bent in the same old way. By the time the child was ready for "school" it already had the habit of being afraid of a thousand and one specific persons, things, and situations not necessarily fearsome at all. The child had likewise formed innumerable dislike habits. It was all right for our early ancestors in their arboreal tenements to be afraid of the crash of a falling tree or the thunderbolt. But the child who hides under the bed during a storm will never become a young Ben Franklin, on speaking terms with lightning.

Well, you might say, it isn't my fault I am as I am today; I'm the product of my parents and my environment. That's true enough. It is up to parents to give their children a good set of habits; but if your parents have been remiss you don't have to remain a bad-tempered person, a coward, or a shrinking, sensitive soul. You can force yourself to change; you can break the mold that imprisons you and form a new set of habits.

Stop a minute and make a list of the things, people, and situations you are afraid of. Ditto for hate and dislike. Then ask yourself whether these specific things, people, and situations are really fearsome or really hateful? For each item on the list put this question to yourself: Why do I like this thing? Why do I hate that person? Why am I afraid of this situation? You dislike many ideas—and have no real reason for such dislikes. Pressed for an answer, you probably reply, "Well, I just don't like them!"

And so I say again, you were not born with a list of specific likes and dislikes written into your very nature, nor with bents or inclinations to talk a particular language, or play this or that set of games, nor with a capacity to engage successfully in any given trade or calling. You were born with a capacity to learn anything, and do anything. The society, the community, and the family into which you were born demanded in varying tones, and with varying rewards and punishments, that you grow up the way they thought you should grow.

Unless you understand the differences between your inborn capacity to learn and the things you actually learned, you will never become a first-class psycho-analyst of yourself. Understand this difference, and you can remold yourself to your heart's desire.

If you were "all there" at birth, you had all the equipment for learning and all the capacity to become intelligent that any human being ever had. You required no habits, no instincts, no innate tendencies for any special job, pursuit, or profession, and had none. But you could learn. What you learned in Hebron, Ohio, in 1927, A.D., was not what you would have learned in Hebron, Palestine, in 1927, B.C. Human nature does not change, human society does change. If you could not have formed habits as an infant, you could never have become a child. The congenital idiot never learns to behave like a human being; it remains an idiot, because specific parts of its habit-forming machinery were left behind.

Anything well learned is easily done and long remembered; it becomes a habit. You learned how to dress yourself; you learned it so well that you never forgot it. You do not recall the countless movements you went through this morning in the act of dressing; and yet they were infinitely complex and difficult.

From the day you were born you began to learn the specific lessons taught you by the hands that rocked your cradle and the hands that fed you. You were a clean slate on which these nurturing hands could write. Most of what was written on that slate during your early years cannot be easily wiped out—your basic habits were formed. But you can still do an infinite amount of changing and molding.

When you became a "personality" you acquired "character." You organized your innate capacity for human behavior along the specific lines of behavior of certain human beings. And having formed certain habits, you had time to learn new things. The fundamental difference between you and an ant is that an ant is born wise and has nothing to learn; you were born ignorant and could learn anything.

A practical question often arises: A childless couple wish to adopt some orphan of unknown and possibly worthless parentage. Dare they take the chance? Will not the child of worthless parents inherit immoral tendencies?

The answer to this question is "No." A normal, healthy child inherits nothing save its physical characteristics, a certain glandular mechanism, and a capacity to *learn.* You were not born with habits of cleanliness, decency, modesty, thrift, stinginess, niggardliness, avarice, selfishness, politeness —none of these habits came with you or any other human being at birth. You were born naked and unashamed; you may be two, five, or ten years in learning to be ashamed of your nakedness. Brought up in one of the Solomon Islands, you will never learn to be ashamed of your own or any other human body; but you would learn to feel undressed if you did not have your nose-pin on.

To the infant, nothing matters but food, freedom from noxious stimuli, and freedom from restraint. Its growing body is a tremendous transformer of energy—it demands action and more action. The tirelessness of children! It is inexhaustible. The insatiable curiosity of children—about everything they can get their hands or eyes on! But mothers want rest and fathers want peace. "Don't!" they say. "Stop! Drop it! Put it back! Let it alone!"

Parents and aunts and uncles, and grandparents and brothers and sisters, are all bent on forcing the child this way and that way—"So that folks will not be ashamed of you," or, "Will be proud of you." The child learns to meet these demands, to adapt itself to circumstances: by honesty or by lies, by smiles or by screams. And rest assured that it is just as easy to teach any child to be self-reliant, honest, unselfish, polite, and fearless, as it is to teach it to be a sniveling coward or a selfish little beast.

Why? Because every child can be infuriated, scared, punished, starved. It can also be fondled, bribed, coaxed, and soothed. To put it another way: It has various specific mechanisms which can be shocked into action of various kinds. After being shocked a few times a spark suffices to set them off.

These childish habits can make or mar for life. Hence their importance. Many an adult never gets far on any road because he learned to carry all his troubles to his mother. She encouraged him. He never learned self-reliance. Many an adult fails because as a child he never formed the habit of getting along with playmates. He never learned to be a good sport, to play fifty-fifty, to take a joke, to play the game through.

I do know that the forces which make or mar us are infinitely numerous, and that we are infinitely complex. Every human being, young or old, is meaningless except as viewed against the background of these forces. And these "forces," I admit, include glandular mechanism, which is inherited and always varies in infinitesimal amounts, and which may at any moment of a human's life so change as to change outlooks, bents, likes, and dislikes. But these are the forces which can and must be studied and recognized, and vested with power to mold personalities.

To say you are what you are because your ancestors were what they were is to deny the evidence of our eyes, and is without any ground of biologic support. Your ancestors have been talking for I do not know how many thousand years; give me a new-born child, and in ten short years I can have him so scared he'll never dare lift his voice above a whisper, or so brave that he'll fear nothing.

The hypothesis that you get that way because that way was predetermined for you at birth is an untenable hypothesis; the hypothesis that you can learn *any* way is tenable, is biologically sound, and can be made to work.

It rests on a firm foundation of experiment and observation which can be stated categorically, thus: No form of behavior, no trait of character, no tendency toward specific ability to learn or acquire any specific way, form, kind, or degree of human behavior, has ever been definitely proved to be innately related to any color of skin, shape of head, convolution of brain, size of brain, form of face, or any other inborn physical trait of any *normal* human being.

That is a sweeping statement; it may be so new to you that you will not like it. But try it out—on yourself or on your children; it will not bite you nor harm them.

No child is a born hog or a born miser. The human hog is a human animal who has never learned the value of social behavior. The human miser is a moral pervert. To hoard gold is not childish, it is not natural. What does the child care for gold—or for anything but food and freedom? Only with learning do marbles, dolls, tops, drums, and so on, and so on, come to have value in the child's eyes; what can it get out of them, what can it buy with them? And it is up to the parents to see that the child gets the proper perspective.

In one household, the reading of books buys the child parental smiles; in another, skill on the banjo or at the piano, or in the kitchen, woodshed, or garden.

Long before the child can talk it has learned various specific ways of getting results. With speech come additional ways. And when to action in motor and speech mechanism there is added a repertoire of emotional reactions, the child has gone far in acquiring an assortment of weapons which will keep the family on the jump. Later in life, tantrums and conniption fits may be of no avail. And even if the adult gives no overt sign of inward rage, tantrums, or tears, these emotional reactions will consume energy better spent on a sober tongue or calculated action with hands and feet.

Any mother who is so busy with other affairs that she must use her ability to scare her child to make it behave, or who habitually makes deceit easier than honesty, and a lie more valuable than the truth, teaches the child its first lessons in unsocial behavior.

You can, of course, as an adult, change your ways—if you have courage and the impulse. Many people become afraid of the *new* early in life. They lose the insatiable curiosity of childhood; they soon exhaust their original impulse to explore the world about them and manipulate it for their own ends.

Impulse is no figure of speech, it is real; and it is at bottom an emotional drive. The goal may be to better one's lot, to get more out of life, to get up in the world. The drive itself is love of something or somebody, or fear of something or somebody, or hatred of something or somebody, or all three combined.

For example, under the drive of being more sociable, you decide to learn to play bridge. You conquer your fear of making mistakes and taking chances, and finally become a good player. That means that you have trained your hands and voice to play the game, and your emotions to keep quiet while you are playing, so that you can give all your attention to the game. Bridge becomes a habit—bad, if you play it when, for any one of a hundred reasons, you should be doing something else that is essential or important.

How many bad habits have you? Do not resent this question: a candid answer to it will do more than anything I know to help you get new and better ones. Probably the commonest of all bad habits is sheer inability to live at peace with one's self and one's family. Have you ever lost a job because you could not measure up to it with your hands or your voice or your head? Rather is it not because you could not get along with somebody? Too much mustard or vinegar?

You are, say, a "shark" at detecting fraudulent checks and counterfeit money; you have all the ways of an ideal bank teller. All but one: You cannot be civil to the president or polite to customers. And are promptly and properly fired.

Being fired may be the very incentive you needed. Having given hostages to fate in the form of a wife and baby, you are driven to look the situation over—in words. That is what words are for, to manipulate the universe from a chair, or a bed, or while fishing. You play and resolve—with words. You arrive at a decision. But what is of more consequence is the way you go about getting results out of that decision, so that you and your wife and your baby can eat the results. Many a man today is president of this or that concern because of some particular time he was fired, or fell in love, or was presented with an heir.

Specifically, then, you can change your ways when—and only when—you have defined your problem and got the drive behind it; that is, when you have decided just what way you want to be and where you want to go. You must do your own psycho-analyzing. It is literally true that there is no help like self-help, and the first step in self-help is to know yourself. Take stock of yourself. And remember that you are in your own hands now; you are your own trainer.

But you cannot train yourself to do new tricks if you cannot make yourself try the trick once. It is the first lesson that is the hardest. After a few lessons it becomes as easy as pie: it is a habit; and a bad habit, if it enslaves you.

You are an actor on a specific stage. Can you get more out of your part, can you qualify for a bigger part?

You play a speaking or a manual labor part, or, more likely, a part which combines action in both voice and motor mechanisms. The school-teacher's part is largely verbal; the farmer's, manual; the stenographer's, about equal parts of verbal and manual. You require no expert to tell you whether you are fitted to play a verbal or manual rôle, or one which combines both.

How skillfully do you play your part? How well do you know your world of words or your world of objects, and how well can you manipulate it? Can you play the piano or the typewriter or tennis or golf, or drive a car, or wash dishes, or tread the maze of crowded streets, or manage a home or an office or a desk, easily, efficiently, without sweat and fret and emotional strain? In brief, like a habit?

Can you use words as tools, as building blocks, as structural plans? Can you build serviceable structures with them, structures which get results, which sell your wares, which carry your ideas to your listeners or to your readers, which manipulate the past and present, and design a future which can be translated into reality?

If not, why not? If your manual or verbal ways are not getting you where you want to go, what is the trouble? Lack of skill? If so, can you by practice become more perfect? Or are you on the wrong track?

As a rule, you have to convince yourself before you can convince anyone else. You must put your heart into your

part. If you do not love your rôle, or love somebody o
something so well that love drives you, you cannot put int
your part half as much energy as you might. Fear may enable you to beat a bull to a fence, and hatred to build a spite fence, but love—of home, of wife, of children, of fellow men, of fair play, of decency, of honor, of adventure, of victory, of country, of immortality—leads to real achievement.

You have become so complexly organized that you will often find yourself pushed to determine the driving force behind your actions, or even behind any specific act. Your "reasons" are likely to be "I like," or, "I don't like." The real reason will be that your actions or specific acts are driven by your visceral and emotional habits.

You may so love your wife that a hateful rôle seems good because of the contents of the envelope on Saturday night. But hating a rôle and playing it well is about as difficult as eating a pie and keeping it—and very few people can do it. The microbe hunters who have everlastingly obligated the world to them so loved their work that they forgot to fear poverty and death.

Apart from the technique or skill that you put into your rôle in the play of life, the only important factor is how well you have organized your "drive." If fear has become the dominant factor in your life, your way is indeed narrow and your horizon shut in. Some people are so dominated by fear that they cannot speak above a whisper or take a deep breath. Their birthright of curiosity to know everything and impulse to do everything stagnates in the bottom of a deep well.

Love and fear are incompatible bedfellows and the union is never happy for anyone, or fertile in socially useful action. Less abject and despicable than fear is hatred, but fatal to more people. They are true twins, spawn of ignorance and brutality. They do more to wreck homes and despoil the earth than famines and plagues.

If your way seems to lead nowhere, try to find out what holds you back. If the rôle you play gets no hand, try to discover wherein your performance has failed. Get a bigger drive into it, or, if you cannot put your soul into it because you hate it or fear it and cannot master your hate or fear, change to another rôle, one you can put your soul into. But into it you must put some drive. Without love, the stage of human affairs loses its main drive and its only creative force.

Love does rule the world, or will when it has fewer fears, jealousies, and hatreds to compete with. You will probably find it impossible to love your enemies; but you can help make it possible for the coming generation to hate fewer enemies.

You can do that as you grow old. Your joints may stiffen and your manual habits—of whittling, of golfing, of driving a car—will drop out one by one. But you will be able to talk. And talk is cheap—it requires but little energy. And even less to talk to yourself—thinking is cheaper than talking. As long as you can think without fear and without hatred you can think new thoughts, and keep on remolding the world to your heart's desire. But if you cannot think without your childish hates and fears you may know that you are old and set.

You are what you are today because you were what you were yesterday—and all the preceding yesterdays back to the day you were born. You can become something different tomorrow by forcing yourself to be something *different* today. It is the here and now that counts today. There are fearsome things in this world: disease, ignorance, stupidity, intolerance; they should not be run from, nor should they cause the cheek to blanch; they should be faced boldly, as hateful things to be removed from the earth. Fear to face the facts of life and resentment against those brave enough to face them have led individuals and nations to physical indigestion and moral stagnation.

The brave have often paid for their courage with their lives. That was a great price; but because they dared—and paid—you face a more open world, not as free as it should be, but never before so free to applaud the record-breaker, enrich the inventor, and welcome home the explorer from his conquests over the unknown; above all, never before so free to say to any and all: "Your way is not my way; but if it satisfies you, if it gives you joy and health and happiness, be on your way, and God be with you."

Which is the better way? One must be brash indeed to say. But I think we can agree that any way is good that is open and marked by sign posts which will keep bugbears and gray wolves and hell fires out of the way of children. I say again that the hypothesis that you can learn *any* way is tenable and biologically sound; it represents possibly the greatest law of nature yet discovered by science; its application can revolutionize human behavior and give the coming generation a chance to get better returns on their capital than we who are set in our ways can ever hope to get.

That unlimited-learning-capacity hypothesis always presupposes, of course, a normal brain. By the way, how much of your brain do *you* use?

CHAPTER V

HOW MUCH OF YOUR BRAIN DO YOU USE?

SUPPOSE you had no brain! You could not read these words, nor hold this book, nor breathe, nor would your heart beat. Without a brain you could not live. It is a vital organ.

Your brain is also an organ for learning. A child otherwise normal was born with just enough brain to live: it breathed, its heart beat, it nursed, it digested food; it lived thirty months. But during that time it never learned to behave like a human being. It never learned anything—not a word, not a step, not a face. It remained as it was born, a congenital idiot. *You* learned words, steps, faces; you learned how to behave like a human being. You had enough brain to learn; you are *not* a natural-born idiot.

For merely functional purposes of the body you require one-twentieth of a brain. The use you make of the other nineteen-twentieths is the difference between you and a congenital idiot. Unless you get this distinction between a merely "living" brain and a "learning" brain I shall not get far in helping you to use your brain more.

Our asylums contain many hopelessly insane. What has happened? Their living brain functions, but something has gone wrong with their learning brain. They no longer behave like human beings—they have lost their "minds."

Your brain is part of your nervous system, which ties the various parts of the body together and makes it possible for you to act as a unified individual. Without nerves you would have no feelings and no movements of muscles. Of what use to you is a paralyzed leg? You have to carry it; it cannot help carry you. It has no feeling or motion —its nerves are "dead."

In order to get the workings of your nervous system firmly fixed in mind let us compare it to a telephone system, of which the "central exchange" is your spinal cord and brain, your sense organs the receivers, and your nerves the wires which convey the message to central. These "wires" are processes or outgrowths of nerve cells, or neurons, which are potentially connected with each other throughout your entire nervous system. And you have nine billion neurons in the bark, or "cortex," alone of your brain. As these neuron bodies are grayish in color the cortex is called "gray matter."

You have perhaps begun to realize that your brain is inconceivably complex. I believe it is the most astounding mechanism in the universe; and possibly the least understood. And unless you really know something about your brain you cannot use it properly.

You are reading this book. What happens? The words strike your eyes. Your eyes, as "sense" organ or receptor, have received impulses—reflected light rays. Your optic nerve carries these impulses (words) to your brain. What becomes of them, what orders does your brain send out? That depends! Maybe your brain says, "Read on," in which case certain muscles of your motor mechanism receive orders to settle you more comfortably in your chair and move your eyes so that you can continue reading. Or maybe your brain says, "Put the book down and go to bed." Result, hundreds of muscles get busy in order to make the order effective. These muscles are called effectors. Sensory nerves carry messages from receptors to central; motor nerves carry orders from central to effectors.

Your body has more receptors than the world has telephone receivers. In fact, your entire body is receptive; every part of it is a receiver. Your skin is receptive to certain kinds of stimuli, your tongue to other kinds; your nose, eyes, and ears are receivers for still other kinds. At this very moment you are receiving innumerable stimuli; either vibrations as light or heat, or both; vibrations in material media —sounds, noises, pressure, etc.; chemical stimuli; physical stimuli.

Your entire body responds to stimuli from within and from without your body. You respond with sections of your body: with a sniff of the nose, a smile, a frown, a word, a walk, a drive, a game. You are always responding, asleep or awake; but the amount or extent of the response is always varying and always involving action in definite responding mechanisms. Through these responses you are putting into effect orders from central. Just as you have countless receptors, and just as every part and all parts of your body are receptive, so you have countless effectors.

Your central nervous system, as I have explained, is the go-between for your body as receptor and your body as effector. Without it you cannot live. With it you can respond to sights and sounds, odors and tastes, heat and cold, frowns and smiles, pain and pleasure; you can talk and walk, put forth effort and adjust yourself to a thousand and one stimuli.

And how do you respond to these stimuli? To the sign of "Help Wanted," to the sight of a comely face, to the peal of a church bell, to the pangs of hunger, to an appeal for alms, to the lure of a trout brook or the door of a movie theatre, to the call for help, to opportunity now knocking at your door, to the cards in your hand in this game of life in which the sky is the limit and the world the stake?

What response do you make? It all depends on the use you have made of your brain.

Your central nervous system is not one central: it is composed of different centrals of different heights and of different degrees of responsibility; each central with its own affairs to manage. Your "learning" brain is the highest central. It is the supreme authority, provided you have put it in charge of the lower centers. The extent to which you have put it in charge gives us a clue to the responses you make to the situations in which you find yourself, and is a measure of your ability to mold self and situation nearer to your heart's desire. It is important, therefore, that you understand the significance of these different centers: the difference between simple reflex action involving a lower center and the kinds of complex action which can only take place through the highest center.

You are seated, let us say, in a chair with your legs crossed. With the edge of the palm of my hand I strike your leg just below the knee cap. Your foot flies out. That act is a simple reflex; the blow on the patellar ligament was carried into your spinal cord, where it was put on a motor nerve ending in a muscle. That muscle contracted, your leg flew out. Impulse (blow of my hand) inevitably led to action (reflex) in muscle movement of entire lower leg. The spinal cord is the center for certain simple reflex actions.

But suppose you resented my striking you as an unwarranted piece of insolence. You get angry. Your heart beats faster, you breathe faster, your blood supply to your viscera is diminished, your blood supply to your motor muscles is increased, your liver converts animal starch into a simple sugar which, carried about by the blood, is available for energy purposes, enabling you to avenge the insult by scratching my eyes out or calling me names. Getting angry at an insult is brain work.

The knee kick reflex was part of your birthright; you did not learn it. Nor did you have to learn to breathe, or blink, or sneeze, or shiver, or digest food, or cry, or struggle, or squirm, or get angry, or be scared or pleased. Centers for these actions were ready to function at birth or shortly after birth.

Stimulus of an empty stomach made you squirm. Stimulus of dust on eyeballs was followed by action in tear glands and eyelids. Stimulus of cold brought about action in gooseflesh muscles and the act of shivering. Stimulus of being dropped or of a loud bang set up a fear reaction. Stimulus of pinioned arms set up an anger reaction. Stimulus of gentle patting or rubbing on skin set up smiling and cooing reactions.

These reactions were performed through the two lower centers of your central nervous system: the spinal cord and the enlargement of spinal cord just inside the skull, known as the medulla oblongata. These two centers, which form the "living" brain, must be able to function from birth because they control the fundamental vital reactions. No child born with deficient spinal cord or medulla lives. A child born without the two higher centers—cerebellum (little brain) and cerebrum (brain), or, in other words, the "learning" brain—can live, but can never be trained or taught. Its eyes may see fire, its nose may smell fire; but it has no brain to receive these stimuli, no brain center which can learn by experience what to do when it sees or smells fire. It does, however, have reflex centers which tell its limbs to move when they *feel* fire.

The "learning" brain is the organ for receiving stimuli from all parts of the body when the two lower centers cannot make adequate responses. For instance, when you resented my striking your knee and burned to avenge the insult, your "living brain" could do nothing about it. It merely caused a simple reflex action; it could not make you wish to scratch out my eyes or call me names. Only the highest centers can receive and correlate any and all stimuli from any and all parts of the body and the outside world, and marshal the forces that insure action other than reflex.

And what is this action? It is action based on experience, action based on the *use* you have made of your brain, action based on how you have trained that organ and what you have taught it.

We must now see how this higher brain center gets its experience, its information, its learning.

Born densely ignorant, naked and unashamed, and without ethics, morals, or manners, you could learn to behave like a skunk or an angel, like a dumb-bell or a genius. Your higher brain center was the only part of you that came clean, untried, and untutored. With it came a body that was soon rearing to go, limbs to move you across the earth, eyes to pierce the stars—in short, insatiable curiosity to explore, to learn. Your young brain was free of habits, the nine billion neurons had as yet no experiences; they were ready for experience, open to suggestion, a vast virgin soil awaiting the planting of habits.

And habits are not instincts. You may think the banker has an instinct for money-making and the mathematician an instinct for figures; and that love of parents for children and of children for parents is "instinctive." As a matter of fact, the banker has no more "instinct" for money-making than has a chimpanzee, nor has the mathematician any more instinct for figures than a Hottentot. Parental love and filial love are not more "instinctive" than is love for cubs instinctive in the tiger; otherwise, parents could never hate their children, nor children their parents, nor tiger mothers eat their cubs when sorely pressed. Bankers, mathematicians, and mothers get certain habits which function like instincts.

Instinctive behavior is blown-in-the-bottle, dyed-in-the-wool behavior; it can't change. You haven't even an "instinct" of self-preservation. If you had you would not be so ready to die for your country or for the woman you love. Why should you have "instincts" when you can form habits which are better than instincts because they can be changed, improved, or thrown away?

Habits are priceless possessions. Because you could form habits you could become clever, efficient, modest, decent, sociable, humane, intelligent, learned, brave, courteous, or the reverse.

At birth you were provided not with innate *instincts* but with *mechanisms* innately ready to function under appropriate stimuli. The empty-stomach stimulus, for example, was transmitted to your highest central, but that central was as yet inexperienced, it had learned nothing. It knew no words to express hunger; it knew no way to get you out of your crib and into the pantry. All it could do was to drive your ignorant body to make restless movements and untutored cries. And that was enough for the time being.

Why?

Because your birthright included the protecting care of a mother and father—to say nothing of doting aunts and uncles and grandparents, and perhaps the staff of a maternity hospital. With such first-aids to bed and board you could afford to take it easy for a while.

And what did you do? You began to stretch your tiny arms and legs and try out your vocal cords. You began to explore the world—of crib, room, house, garden, street, town, things hot and cold, soft and hard, near and far, smooth and rough, sweet and sour, wet and dry, good and bad, "do" and "don't," "can" and "can't," smiles and frowns, rewards and punishments; of things scary, frightful, dangerous, wicked, nice, shameful; of dogs and cats and bugs and worms; of dusty roads and plowed fields; of tacks and glass and rusty nails and grease and dirt. Some of these things, beings, situations, qualities, and quantities you explored with your fingers, others with your eyes, your nose, your tongue, your ears; some with the bare skin of your arms or legs or body. Some you explored with fingers, nose, eyes, lips, tongue, and stomach. Gingerbread, for example.

And these things became known to you because you explored them and because they answered back. A needle impressed your finger one way, a piece of chalk another. Every single thing had a message for you. Your eye was stimulated by the flame of the candle; your ignorant central sent your hand after the flame; your hand was burned; the pain experience was delivered to the brain. The sight of a lighted candle again stimulated the eye, but this time the brain did not send the hand forth to explore—it knew better.

You learned by experience. Your brain had a record of that experience. Countless infantile experiences were burned in; brain cells are the repositories of the scars. You were born with enough to get by the first day. Before you were a year old you had learned more than a horse can learn. Before you were three you had learned more than a chimpanzee can learn. Before you were ten you had learned more things than Solomon could have dreamed of.

Your spinal cord and medulla—lower centers—are wise at birth; they don't have to learn their mechanical reactions. But your cerebellum and cerebrum—higher centers—are so free from habits and so ignorant of the world that they are capable of putting on the most varied and most complex habits, good and bad. They can learn what is right and worthwhile and earn you the respect of your fellow men; or they can specialize in evil so that your name is execrated in decent society.

Stop for a minute and let this sink in: You are capable of more varied and more complex habits than any other living creature. Why? Because of the extraordinary capacity of your "learning" brain. You were born a perfect dumbbell and you had to learn, or remain an idiot. Do you realize that your six-year-old brain which guided your legs to school had already learned the essentials of human behavior? However, you must also realize that if those first six years were misspent, if during them you learned a number of bad habits, you are in for a lot of hard work to make up their deficiencies.

Think of what you could do at birth, and what you can do now! Think of what you knew at birth, and what you know now!

And yet your "doing" and "knowing" mechanisms are not in themselves remarkable. What is remarkable is the *variety* of things you can do and the *extent* of your knowledge—therein lies the big advantage of being human. The great apes have hands as clever as yours; their senses of seeing, hearing, tasting, smelling, and feeling are as acute as yours; their nervous organization is as complex as yours. But no ape can use its brain as you can yours, because it has not as much brain to use. Its central exchange for receiving, recording, and remembering messages is not so large as yours. It cannot look at pictures of steamships and say, "Next year I shall go to Europe on that steamer!" It cannot so manipulate a thousand conflicting and complex impulses that one simple response—perhaps a nod of the head or a mere "Yes" or "No"—resolves the problem. You can. Your larger learning brain makes such varied responses possible.

What do you respond with? With a nod, a frown, a word, a handshake, a kiss, a glare, a flash of anger, a panicky feeling? All actions in muscular or glandular mechanism. Let us look at these mechanisms. They are important. Without them you are as lively as an oak tree; with them you do everything that you do do; with them you use and develop your brain.

When you "do" anything action takes place in certain muscles of your motor mechanism. When you talk or read aloud you use your voice mechanism, which is a special segment of your motor mechanism. When you read to yourself or "think" you also use that mechanism—but under cover, as it were. The difference between the labor involved in thinking and talking is comparable to that of holding a paddle in still water and paddling a canoe against the current. That is why thinking is so easy. That is why more people think great thoughts than do great deeds.

That part of your motor mechanism which does great and little deeds, which plays ball, swims, pounds a typewriter, shaves, puts on clothes, lays bricks, dodges automobiles, brushes teeth, and puts you to bed and tucks you in, becomes organized into specific ways of behavior. Call it your "manual" behavior—to distinguish it from the ways you learn to act with your voice mechanism, your "verbalized" behavior.

At birth your repertoire of manual and verbal behavior was next to zero; now it is miles long. That repertoire is a measure of the use you *have* made of your brain, and that measure is an index of the use you *can* make of your brain. For the more use you make of your brain, the more brain you have to use.

Skill in any form involving action in motor or voice mechanism comes only from practice—after you have learned it like a habit. Habits cost time to learn; to keep them up costs next to no time at all. Nothing you ever learned was so difficult or so complicated as learning to walk and to talk; yet you learned them so well that you are not afraid you will forget how. To walk and to talk are habits.

But can you walk anywhere, or talk about anything? Or did you learn to walk only here and there and to talk about this and that?

You walk well enough, let us say, to get you from one day to the next without being run over for a jay, and you talk well enough to hold down a job. Are you in the habit of letting "well enough" alone?

A whole army of people in multifarious jobs let well enough alone. Sticking to the job becomes their career. Not to be fired becomes the goal of their ambition. To let well enough alone has become the supreme habit of their lives. It is as though they said to themselves: "I can walk only here and there; I can talk only about this and that."

To those who have become accustomed to let well enough alone, who are in the habit of accepting their limited rôle or station as final, nothing that I could say would serve as a stimulus for effort to extend their repertoire of accomplishments, to use more brain.

But to you who would get more out of life, whose interest in life has not been dulled, whose ambition to learn is still keen and vigorous, whose desire is for self-assurance rather than for mere guaranteed existence, who, in short, would use more brain than just enough to get by, I offer these suggestions:

First, *learn more;* extend your present repertoire of manual and verbal habits. This does not mean that you must go to school again. The idea that you can get "education" in a schoolroom only and that your education stopped when you left school is a stupid idea. You learned fast and much in your first six years at home. No school education can ever be so valuable as what you learned before you went to school. You are again out of school, but why consider your education finished? Consider, rather, that it has only begun anew and that nothing can stop it but senile decay.

Therefore, I say, learn more. How? With sweat—until you know it so well that you do it without effort.

If you can build a hen coop you can build a garage of a kind. If you can talk Latin you can almost talk Italian, Spanish, Portuguese, Rumanian, and French. If you know much English you know some Anglo-Saxon, German, French, Italian, Latin, Greek, and several words of other languages. Men and women keep turning up in foreign-language schools who cannot learn a foreign language because they never really learned their mother tongue.

What is the size of your vocabulary—two thousand words? That is the normal allowance for a child of six. Shakespeare used twenty thousand; Milton built his masterpieces with less than half that number. But an intelligent farmer today requires twenty-five thousand.

Words are tools, the most amazing and important yet invented by the human brain. Lack of them may be as fatal to your progress in certain endeavors as leaden feet or untutored hands would be in other endeavors. Lack of knowledge of how to use words is as great a handicap to a writer or speaker as is ignorance of how to combine brick and mortar to a mason. To build with words or bricks requires more than mere knowledge of words or bricks; it requires knowledge of the rules of building.

The direction in which you will devote time and energy to learn more will depend, of course, on many factors. I cannot know these factors, for they are personal, individual, unique. Why you should learn more, and what, will in general be determined by the situation in which you find yourself. And that depends on the use you have already made of your brain.

This brings me to the second suggestion: *Survey that situation in which you find yourself.* Analyze it, inventory it; how much do you put into it, how much are you getting out of it?

By "situation" I mean your personal and private habits, your home, your community, your wardrobe, your bank book, your family, your friends, your job, your sports, recreations, and hobbies; in fact, anything which consumes time and energy. Of course, if you set no value on your time *outside* "office hours," you are not likely to be critical about the time and energy you put into anything except your "job." And yet millions of pay checks remain the same because these out-of-office-hour situations are not scrutinized. They dissipate energy; they consume time; they often contribute nothing toward a higher step. Do you get anything out of them that you can cash in on—today, tomorrow, next week, next year, or five, ten, or twenty years hence? If you don't, you are wasting good brain power.

Survey your cultural environment. Ask specifically of this and that factor in it if it gives you what you need or what you can turn to good account in the business of life. And if not, why not? And what do you propose to do about it? Make certain that you realize where you are and the price you pay. Can you afford it? If not, cut out time-wasting, energy-consuming diversions and rearrange your time-table as though you really meant to get somewhere.

By analyzing your situation you will get an insight into yourself. And here comes the third suggestion: *Inventory* *yourself.* And note that such an inventory can only be made against the background of your own environment, including your job.

That job, let us say, is of a stenographer. Do you intend to be a stenographer forever? Or do you wish to add to your present knowledge of stenography such education of your motor and speech mechanism as will fit you to become partner or boss in the office you now work in? What do you have to do to become partner or boss? Is there any reason why you cannot learn to do it? And remember you cannot learn by reading about how someone else did it. You may be stimulated by the reading to make a start; but you will learn only by doing it yourself—with your hands, your voice, your brain.

You must be your own "psychoanalyst." There is nothing mysterious about it; it is easy; you can do it. Begin on your neighbor; analyze him. What are his speech habits, his manual habits, his emotional habits? To what use does he put his eyes, his ears, his nose, his tongue, his fingers, his opportunities? What is his general behavior? Then inventory yourself the same way. After a little practice you will need no expert to tell you why you are not on the way to the top. And when you have discovered the reason translate it into action. Be on your way! Use your brain more.

And do not be afraid of crowding your brain or of overtaxing its capacity. Fear, rather, a possible shortage of well-selected and serviceable habits so ingrained that they are always and immediately available for the trying out of new experiences.

My fourth suggestion is: *Stop fussing;* don't get excited over trifles and never get so excited over anything that you can't see straight, walk straight, or talk straight.

Your job demands unified effort; you cannot give all you have to the work at hand if you are emotionally wrought up. With every crisis you upset yourself. And while upset your brain is bossed by your passions: the highest function of a human brain is usurped by the lowest thing in life.

Can you get so angry at a letter that you tear it up? Or so angry at a telephone that you smash it? Or so afraid of losing your job that you are not fit for work? Or so afraid of an idea that you will not look at it? Or so enamored of an opinion that you cannot discuss or change it? Or so ashamed of possible failure that you cannot try to succeed? Or so afraid of being thought poor that you cannot economize? Or so ashamed of your ignorance that you cannot expose it by asking a question or consulting a dictionary? If to each of these questions you answer "Yes" I can only say that your emotions have served you no useful purpose.

Now, these fears, hatreds, and dislikes are yours—specific for you. You *learned* them. They became habits by virtue of training and indulgence. And the fact that you learned them so that they became part of your personality furnishes positive proof that you can overcome them by forming other habits. You can learn to face any known fear and explore the unknown. You can learn to hate the useless, the ugly, the false, and to keep them out of your life. I say you can do this if you want to. Your brain is there to help you. Use it. Go on experimenting with yourself.

Which brings me to the fifth suggestion. You learned as a child by experience, why are you afraid to experiment now?

Don't be afraid to try. If you hadn't stumbled you couldn't have learned to walk; if you hadn't mumbled you couldn't have learned to talk; if you hadn't fumbled you couldn't have learned to catch opportunities. Build up your platform—of knowledge on which you can stand, of trained motor mechanism which can move you anywhere, of speech which can make you at home anywhere. If you use your brain by doing more things you will have more brain to use.

Let us now take a look at certain general principles which will aid in helping you understand yourself and your capacities. First, the question of heredity: does anyone inherit a "good" or a "clever" brain?

You inherited a body, including eyes to see with, ears to hear with, nose to smell with, and tongue to taste with. Also, a skin beset with nerves to feel with and an entire body which can ache and pain, but which under normal conditions "feels" good. Also, a chemical laboratory for the digestion of food and a circulating system for delivering food and fuel to all parts of your body. Also, glands: some to regulate vital functions; some to regulate normal growth. Also, a mechanism to walk and talk with. Also, a nervous system which binds all parts, organs, systems, tissues, and mechanisms into one individual organism and makes unified response possible.

These physical structures of bones, muscles, tissues, glands, mechanisms, and nerves vary individually. There are no two human beings absolutely alike. Just why is not entirely known. Some are born with more acute vision than others; some hear higher or lower frequency tones than others; some inherit larger frames than others. These incidents of physical inheritance should be taken for what they are—physical traits, and nothing more. They are so remotely related, if at all, to so-called brain power that they may be disregarded.

Do not worry about your physical or cultural inheritance. Do not worry about what you have not got or do not know. Find out, rather, *why* you do not have it and do not know it. And assume that, unless you are a congenital idiot, you *can* get it and *can* know it. But first decide that you want it and are willing to put enough time and energy into it to get it and to know it. Your brain is ready to do its part. Extend its usefulness.

Naturally, you will get tired now and then—you have to rest. Why can Edison work only eighteen hours a day? For the same reason that a light ray can travel only 186,000 miles a second; if it traveled faster it would burn up. As a boy your back soon wore out picking potato bugs. But do you recall how restful it was to a back tired out picking potato bugs to go swimming?

What happened to that tired back that joyously carried you to the creek? New stimulus! Change! You can lose interest in anything. You are not a plow horse, nor a milch cow, nor a galley slave. Your very nature demands change; as a human being you are entitled to new stimuli, new interests—unless you have surrendered your birthright to the tyranny of fear or deadly routine.

Thousands and thousands of men and women go stale on their jobs, their wives, their husbands, doing the same old things in the same old place.

When something has lost its kick, try something that has a kick. I cannot tell you what. But do something different. Change your boarding-house, or fall in love, or have a baby, or fire the cook, or buy a new car, or take up French, or plant a garden, or (best of all!) begin to ask questions again as you used to do when a child. Get curious, explore, experiment, give your brain an airing.

You can be "all worn out" with one thing, and still have enough energy to get excited about a movie, or a story, or a prize fight. Many a time you have got your dog-tired body to bed, to find yourself within five minutes fired with ambition to cross the Alps, become queen of the movies, mayor of your town, or tell the world what you would do if —— Something has served as a stimulus. Maybe an idea has flashed into your mind and rekindled your fires. Perhaps something you've read has pricked your dull senses. At any rate, you are again rearing to go—life has got back its kick.

Perhaps you are marooned in some stagnant pool of routine. Reading this book will not move you. It may stimulate you to open your eyes and to take stock of yourself. But you must move yourself.

You are not naturally lazy. If your intestines are full of hookworms, or your blood full of malaria you are *unnaturally* lazy; an alien enemy is sapping your energy. A lazy body is a sick body, or a body which has accepted defeat and abandoned hope. A lazy child is a sick child, or a child in the wrong pew. The child that is dull in mathematics is the child who has never met mathematics as a friend.

If you are dull in anything, don't assume that you are just naturally dull. You were naturally sharp. Find out what or who dulled you.

A personal incident will illustrate this point. An impossible teacher dulled my zest for chemistry—and I learned none as a freshman.

Some years later I found that I had to have chemistry before I could get physiology, which I needed and wanted. My "dullness" for chemistry vanished before the new stimulus. I do not know whether that freshman chemistry teacher thought me dull or lazy; I do know that when I went at chemistry with a "will" I went at it with a loaded stimulus.

The geniuses of the world were builders—with words, with brick, with granite, with tones, with pigments, with wood, with steel, with chemical elements, with physical forces, with electrons, with ideas, with fantasy, with imagination, with sweat and time and energy.

And you can emulate them if you want to. But "Lives of great men oft remind us" is just piffle—unless somehow, somewhere, you can get such a kick out of the "reminder" that you start on your own hook.

Lives of great men should be used as you would a cookbook—to help you bake something you can eat and grow on and live by.

Edison lives on electricity, Millikan on electrons, Ford on flivvers, the Mayo brothers on operations. A steady drive at one thing, kept up long enough, will make you famous and possibly a genius.

If you are in love with it you can adapt your life—and even your alimentary canal—to its pursuit. There is, of course, plenty of room for the jack-of-all-trades; but if you would be past master of one you will have to guide your time and energy toward that goal and put your heart into it.

Your brain is limitless; do not circumscribe it with a Chinese wall of ignorance, nor let it slumber while you go through the same old life in the same old way, rooted to your job like a tree.

Load it with new sights, new sounds, new tastes, new vocabularies, with new experiences. And remember, the more you use your brain, the more brain you will have to use.

But your brain cannot serve you well if you are a slave to your emotions. What commonly passes for "guts" is of great import in life; today as a million years ago; but if you cannot control your passions, your passions will control you. As we are all potential murderers, let us have a look at the function of emotion and see if this side of our nature can be brought within reasonable control.

CHAPTER VI

WHY SHOULD YOU CONTROL YOUR EMOTIONS?

COULD you commit murder in cold blood, or in warm? Are you sure? Are we all potential murderers?

You are by nature warm-blooded; or rather, you are a constant-temperature animal—temperature being regulated by your blood. When your temperature varies much from ninety-nine degrees you are unnatural and had better see a doctor. Is "cold blood" or "warm blood," then, a mere figure of speech? If so, what is behind such expressions as "slain in the heat of passion," "murdered in cold blood," "scared cold," "boiling hot mad," etc.?

"You are a fool!" Does that anger you, possibly make you want to annihilate me? "You are clever, handsome, adorable!" Does that make you smile, possibly make you like me? "Your child is on fire!" Does that alarm you, possibly make you run faster than you ever ran before? A madman brandishes a bomb in your face. Does that put you in a cold sweat? Ravenously hungry, you discover a hair in your first spoonful of soup. Does that turn your stomach?

Whatever it is that enrages you, makes you like somebody, alarms you, wrings cold sweat from you, or turns your stomach, has this in common: power to *move* you. And the way you "move" when enraged, in love, alarmed, injured, or nauseated, is the index of your control over your emotions; a register, as it were, of your usefulness to society and your success as one of a social organization—yes, of your sanity.

The business of emotion is to move. If anger can move you to slap your wife; love, to kill the husband of your inamorata; fear, to fall in a dead faint; pain, to cry your eyes out; or hunger, to steal—you are so controlled by your emotions that you are a social menace and should not blame society if it shuns you, locks you up, or hangs you.

Pain, anger, fear, hunger for food, for mate—these are the impulses which drive us to live out our lives. As growth, or rejuvenescence, is the one outstanding criterion of life, so hunger is the one outstanding impulse which moves living beings to live. Hunger is the primordial, the oldest drive in life, the first emotion. The ways living beings are moved in answer to that hunger drive make up the life history of living beings.

Does this seem too abstract? Then let us make it concrete.

Hunger in such animals as chickens and human beings is action in viscera, a visceral drive. Remove the viscera from a chicken—or a human being—where will it be driven? Nowhere. It dies, as inevitably as the clock stops when you remove its works.

In the language of the Chinese, who invented cook books, hunger is emotion number one chop.

If I steal your dog's bone your dog will be so enraged that it will be driven to bite me. If I steal your child's food your rage may drive you to kill me. Rage is emotion number two. And fear is its twin. For rage and fear are literally twins under the skin. I may be so fearful that you are going to steal my child, and that the arm of the law will not restrain you, that I take the law into my own hands and kill you; or if I cannot do that, I take my child in my arms and flee from you as I would from a mad dog. In either case, fear moves me. Fear is emotion number three.

Pain also is a mighty emotion and moves men to drink, to drugs, to the dentist, even to self-destruction. Pain, real or fancied, is probably at the bottom of almost all suicides—except in Japan, where one may kill oneself for the honor of something or somebody; or in India, where a wife may immolate herself on her husband's funeral pyre. Call pain emotion number four.

Is pleasure an emotion? We certainly have pleasure-seekers; and some seek it in queer places and some pay dearly for it. Nor can it be doubted that they are driven often, like madmen, to distraction, if not to destruction. But pleasure is not a primary emotion, for in the last analysis it is found to spring from the satisfaction or anticipated satisfaction of some hunger or want. We do not visit the dentist because it is a pleasure, but because he is a pain-killer. We do not eat for pleasure, but because hunger drives us to eat—sometimes very unpalatable food. Nor do we marry for pleasure, but because we are driven to mate. Food and mate may yield such pleasure that no other kind will satisfy, but pleasure in itself was not the motive power which drove us forth; hunger was. Or rather, hunger is movement in the hunger motor which drives, moves, or emotes, when its supply runs low. With food the power in the motor is renewed; with a mate the motor has potentially renewed itself.

Hunger, rage, fear, pain: on these four primary emotions are built all other emotions. How many? I have never counted them, but here are a few that keep moving us this way and that, up and down, in and out: vexation, anxiety, worry, sorrow, grief, despondency, resentment, admiration, awe, reverence, disgust, loathing, wonder, gratitude, scorn, reproach, revenge, bashfulness, shame, jealousy, envy. I cannot stop to analyze these emotions here, nor is it necessary, for what really matters is a good understanding of the primary emotions. That helps us understand all other emotions.

I do not mean to imply, of course, that such "states" or bodily "sets" as anxiety, sorrow, shame, envy, etc., are simple. They are far from that, and are generally compounded of two or more primary emotions. Thus my anxiety may spring from a food or sex hunger and the fear that I cannot gratify it. Or, my reverence for the bishop may be compounded of my fear of his power and my craving for some of it. My shame may result from my fear of being caught in the gratification of a hunger drive in a manner unacceptable to society. Jealousy is a compound of love and fear or hate. We fear or hate a situation, and especially the person, that threatens our hold on a loved one—husband or wife, father or mother, brother or sister, or friend.

These mixed emotions may attain ascendancy over us and move us, for example, to kill the person we are jealous of, grovel at the feet of the person we reverence, or sneak away like cowards when we are ashamed. But let us sidetrack them and look at the bigger question: why murder at all?

Note that I said "murder at all." Not, why did Gray murder Snyder or Hickman murder a little girl, but why any human being ever commits murder, why you and I and all of us unhung and out of jail are *potential* murderers.

That is simply another way of saying that human nature is fundamentally the same: every normal human being can be moved, or emotionally aroused, and under the drive of emotion must do something. To that extent we are all alike, ll tarred with the same brush. Our birthright includes a ommon emotional endowment.

This endowment is biologically useful. Why useful? ecause our ancestors were evolved in a jungle; they *had* to ight, kill or be killed, or anticipate defeat and flee for their ives. Pain likewise has biologic value—it is a sign of njury, nature's cry for help: remove the cause of the injury r suffering. Suffering is disease, potential death.

The biology of hunger is so obvious that it also may be stated in few words. You and I, since we began our individual existence as a fertilized ovum, have been growing. We could not build, and we cannot repair, our body without the stuff of which our body is made. We cannot keep our body engines going unless we supply them with fuel. We cannot go on living "forever" unless we transmit a chip of our body to our offspring. In short, we must find food or we lose our life; a mate, or we lose our immortality. As a matter of fact, we find in all animals what amounts to a hunger mechanism, and also some form of equipment to enable them to deal with life or death situations. This equipment is just as biologically useful as the hunger mechanism.

Do I seem to overemphasize the emotions of hunger, rage, fear, and pain? They cannot be overemphasized. Failure to understand their nature, significance, and biologic usefulness has led to the writing of incredible amounts of rubbish about human behavior. These emotions are not only primary and fundamental, they are necessary; they can no more be eliminated from our birthright than our stomachs, and are disregarded in the training of children only at the peril of society and of individual human happiness.

When we are hungry we are *driven.* When we are enraged we are *driven.* When we are afraid we are *driven.* When we are in pain we are *driven.* Driven where? How do we satisfy these drives? That depends, as we shall see. But let us look further at the drives themselves.

"Drive" has been dramatized in so many ways that it may seem a mere figure of speech. Time and again the motive which has led to cannibalism, rape, murder, insanity, etc., has been imputed to some supernatural agency or to some "mental faculty," "moral sense," or other unknown factor. Hysteria, for example, is a form of diseased personality, an emotional disturbance; Hippocrates thought women might be driven into hysteria by the uterus wandering about the body searching for humidity!

What Hippocrates—and his followers till Darwin—failed to realize was that such highly organized animals as man *must* naturally be able to do certain things or they cannot live; that implanted in their very nature must be certain fundamental emotions or drives. Every move they make results from an organic drive. They must satisfy hunger, they must kill or escape from their enemies, they must get rid of pain; or they die.

It remained for a scientist of this generation to expose one of nature's most cunning and deeply hidden secrets, whereby these organic drives are reinforced in the crises of life. Few books since Darwin's *Origin of Species* have given us such insight into human understanding as Walter B. Cannon's *Bodily Changes in Pain, Hunger, Fear and Rage.* Let us look at these "changes."

Suppose I inject into your arm a tiny bit of a certain drug. Within a few seconds after it has been picked up by your blood it has passed by the doorstep of every one of the billion cells of your body. What then? Your heart begins to pound as though it would break through your chest. You breathe faster and easier. You become pale. You are more wide-awake, more *nervous*. All this you can realize for yourself. What you cannot see are the far-reaching changes within your body.

The blood-vessels of your abdominal viscera contracted, thereby forcing the blood out and into other parts of the body. The blood-vessels of your skin contracted, hence your pallor, and hence the greater effort required by your heart to maintain your blood in circulation—hence the increase in your blood pressure. Your liver converted a certain amount of complex sugar called glycogen, or animal starch, into a simple sugar called glucose.

Because of these bodily changes you are now a *changed* person. You have in the twinkling of an eye, as it were, changed your nature. Let us see.

With less blood in your viscera, the vital processes of digestion are slowed down to a practical standstill; they cannot work without lots of blood. Other things being equal, the more blood they have the better they work. Why? Because only in the blood can they find things to work with, energy to work with.

My arm as it now writes is at work; its muscles are engines, their fuel is sugar (glucose). They get that sugar from my blood. As I write, I presumably use my brain also; it is working. Its energy comes from sugar. Do you see the point? As a result of that drug in your body, you now have more sugar (more potential energy) in your blood than you had a moment ago. That energy is now less available for your viscera; it is more available for the big muscles of your arms, legs and trunk—the muscles with which you fight or run—and for your brain, which directs your fight or your flight.

This is not all that drug does to you. What is the significance of your pallor? If I were to gash your face or any part of your body, you would not bleed as fast as you would a moment ago. Because the skin vessels are smaller than they were, the escape of blood from the body is slowed down. But more amazing still, your blood itself, because of that drug, will now coagulate more rapidly than it would otherwise! Do you begin to see the biologic importance of the changes this drug induces?

After a hearty meal I am stretched out at my ease, enjoying life lazily under a tree in the field, thinking about nothing in particular, and therefore needing no great amount of blood in my thinking or motor apparatus. But inside my body enormous activity is going on in my thirty-two-foot alimentary canal, such activity as can only be performed in chemical laboratories like your body and mine and with the aid of certain chemicals and a constant temperature. In short, my digestive processes, on which my life hangs, have the call on my blood.

I am suddenly aroused from my stupor by a bull. He is only a few feet away, pawing the earth, head lowered. What shall I do? Here is where this cunning device of nature plays its hand. For the drug which I, figuratively speaking, injected into your arm, is now shot into my blood. That drug is adrenin, manufactured in a pair of our own numerous chemical laboratories called, because of their position just above the kidneys, adrenal glands.

The biologic usefulness of adrenin? What matters it whether my stomach goes on digesting that meal or not, confronted as it is with the bull's horns? It is infinitely more important that I get my stomach out of harm's way. And, in a sense, it says to me: "Take my share of energy and use your legs and your head to get me out of danger."

Figure of speech—yes; but a known fact behind it, a fact that can be put to experimental test, an outstanding fact in the science of human behavior.

Because my digestive system has obliged my lungs, brain, and legs with an extra supply of energy, I can now beat my record for the hundred-yard dash, climb a tree hitherto impossible, or put more cunning into my strategic handling of a bull than I ever thought I could. Adrenin, in short, has more than "pepped" me up, it has suddenly put my body on a war footing; mobilized all my forces to enable me to fight harder, run faster, think quicker than I could in times of peace.

Adrenin is released into our blood in every emotional crisis. It is a crisis mechanism and is available for every normal human being in every crisis. What are our crises? Whenever we are roused by any strong emotion—great hunger, rage, fear, pain. Any one of these emotional states will alter our body—changes us. If the emotion is strong, adrenin will be released, and as a consequence we are now more efficient in satisfying hunger, escaping pain, or killing or fleeing from our enemies.

These adrenal glands are vital organs. Remove them, we die. Any upset in their normal functioning upsets us and makes us behave abnormally. The drug they secrete, as you may suspect, is one of the most potent known to science. How potent? Professor Hoskins worked this out in terms of city watering carts of two hundred and sixty-five gallons each: it would require the water of a twenty-mile procession of such carts to reduce an ounce of adrenin to a test dose! If diluted to one part in 330,000,000, it will depress the intestinal canal. Had I injected a large dose into your arm it would have killed you.

Note again what an infinitesimal amount of adrenin depresses your alimentary canal, and then begin to use your imagination. How many times have you felt depressed this week? How many times have you been emotionally aroused?

Any strong emotional excitement—anger, fear, grief, pain, longing, vexation, worry, or anxiety—slows down your vital processes; more exactly, stops digestion. And this is no figure of speech. Not only do the glands responsible for the secretion of digestive ferments stop, but action in the alimentary canal itself stops whenever we are emotionally aroused. Note, too, that the emotional factors which upset digestion are more powerful in their influence than the factors which promote digestion. To this add the fact that most of us are more creatures of emotion than we are of intellect, and you have some idea of the price we pay for our struggle and worry.

It cannot be too strongly emphasized that the prime factor in any well-ordered life is a sound, healthy alimentary canal, always fit to function as nature intended it. Other things being equal, we feel good in proportion to normal, healthy activity in that canal. Whatever upsets it upsets us. Nothing can upset it so quickly or so intensely as hunger, rage, fear, and pain.

Pain can be as potent in the release of adrenin as a towering rage or an abject fear. Man no less than other animals in an agony of pain is moved to action to get rid of the pain. The muscles of the body are taut, ready to do their part to help escape, even as they are when for any other reason we are fighting to kill or fleeing for our lives.

What happens when, agonized by pain or terrified by fear, we break into a cold sweat? Pain or fear calls for action—action, as we just saw, in the muscle engines which move the body rather than in the muscle engines which prepare the body's energies. These motor muscles in work produce heat. That heat must be got rid of through sweat to preserve normal temperature. Hence the cold sweat of pain or other great emotion may be looked upon as an emergency reaction, cooling the body in anticipation of hard work to come.

Fainting following strong emotion is a similar anticipatory reaction. Work in skeletal muscles releases carbon dioxide, the end product of sugar oxidation in the working muscle. Excess carbon dioxide in the blood speeds up breathing, whereby the blood is relieved of its carbon dioxide and replenishes its supply of oxygen; but if the excess carbon dioxide be prolonged it paralyzes the respiratory center, which induces asphyxia—fainting. But asphyxia itself liberates adrenin, which so acts on the muscle walls of the bronchioles of the lungs as to make breathing easier. Consequently, emotional asphyxiation or fainting, while it seems to impair the body's efficiency, really prepares the body to meet an emergency, by inducing an additional discharge of adrenin into the blood.

Or, take the matter of "second wind," which has won many a race and many a fight in many a field of endeavor. What happens? Some additional stimulus appears, to liberate more adrenin, whereby the little lung sacs are relaxed, more sugar is poured into the blood, and the fighter or runner breathes easier, has more energy to expend. Vigor has been renewed, as it were, by a miracle.

One of the finest little stories that came out of the World War was about a company in retreat after forty hours of ceaseless effort. The men, fatigued wellnigh to death, dragged one foot after the other only with extraordinary effort, not caring much whether they ever got out or not. The commanding officer was in despair. Suddenly some one started an old familiar and well-beloved tune on a tin whistle. The change in the men was nothing short of miraculous. What had happened? The tune aroused their emotion, and thus moved, the adrenal glands delivered the only kind of refreshment their bodies could use in the crisis. They straightened up and marched like men.

Fit companion to that story is this bit of Indian lore: "Finally the quails got tired, but the coyote did not, for he was angry and did not feel fatigue." The coyote, of course, got the quails he was after. He did not feel fatigue; he was so hungry he was angry. Under the drive of his anger his fatigued body was refreshed. Adrenin did it. It not only brings up fresh energy, but in three minutes will refresh a tired muscle more than an hour's rest. It would have done as much for the quails if they had got scared enough. They were just tired; they got no second wind!

We are now better prepared to understand why it is that men torn from their settings, freed from the normal inhibitions which restrain them in the ordinary walks of life, can, as members of a mob or an army, suddenly become so roused to fear or rage that they almost literally cease to be human beings. They grovel like swine, or mutilate, ravage, slaughter, burn, loot, and destroy, like the madmen they are.

Likewise we can now see how, under the sway of these strong emotions, especially when reinforced by adrenin, our capacity to kill and our ingenuity in killing may be so increased beyond what we have learned to regard as normal behavior that we can commit murder for such an insignificant thing as a loaf of bread, a fancied insult, or a dirty look.

Worry about my next meal can not only stop the digestion of my last one, thereby leading to intestinal disorders, including constipation, but under certain circumstances might drive me into the ranks of anarchy, from which point of view I might feel justified in breaking into a store to steal food, and even in killing anybody who seemed to stand in the way of my getting it. Worry—or any other strong emotion—

can also stop the secretion of milk in nursing mothers and upset the regularity of the lunar cycle.

So much for the biology of emotions. That side we all have in common; to that extent our emotions control us. Without emotions we would be idiots; with too much emotion we become biologically unfit, socially abnormal. The body cannot perform its normal functions, nor, specifically, can the hunger drives be biologically satisfied, when we are gripped by pain, rage, or fear. Let us now look into the matter of control.

Control? So to control our emotions that they will not drive us crazy, or into a felon's cell or a dyspeptic's grave; our hunger, that we will not cry for caviare or adore a dog; our rage, that we can plan how each noxious thing, situation, or person may be dealt with; our fears, that we can save our adrenin for the supreme effort when we must keep wide-eyed and alert to save a human life; pain, that we can use our brain to learn its causes and alleviate suffering. Such control is worth great effort and the expenditure of much adrenin.

And for what do we expend our adrenin now? Consider such action as is represented in these random samples:

A father comes home and in a blind rage kills his wife and two small children; he had no quarrel with them, cannot even recall what started his rage. Eight listeners-in to the account of a prize-fight last year were killed by emotional excitement. One of them happened to be a boyhood friend of mine. He knew neither of the fighters, had no bet on either; it was not *his* fight, but he died in the fight. A woman steps up to greet Lindbergh and presents him with a bouquet; she bursts into tears and cries like a baby. A preacher leaves his wife and children penniless and elopes with a choir girl. A man crossing the street is scared senseless by the bark of a dog and rushes in front of a truck, which kills him.

Father got so mad at an editorial that he tore up the paper and upset his coffee, which so upset mother that she bawled him out, whereupon he gave her a piece of his mind in tones that scared sister into a screaming fit, provoking brother into idiotic snickers, which so further enraged father that he slapped both children, kicked the cat, rushed off without an overcoat or a good-by kiss to mother, and slammed the door so hard he knocked down the "God Bless Our Happy Home." In his blind scramble to catch his train he upset the parson's wife, which so humiliated him that he got into the local instead of the express, which got him to the office thirty-five minutes late, which so infuriated the boss that he was promptly fired, which so sobered him up that he decided to get drunk and take a fresh start; but before he got started afresh he died of pneumonia. What chance has *life* in such a family?

Or rather, what was in that editorial which upset father and incidentally threw a widow and two orphans, three nervous wrecks, on the hands of the local lodge? Did it endanger father's life, attack his character, question his wife's honor or his children's sanity? No; it only said that Heflin was right and that anybody who rooted for "Al" should be tarred and feathered.

Was father born that way? No; none of us is born that way. Our birthright does not specify that we shall be a particular kind of a jackass; only that we can be any kind known to history. Where, then, did father get his stripes? From his folks; they branded him. "Folks?" His teachers and playmates, especially his *primary* teacher, his mother, and his first playmate, his father.

It is even so. Father, you and I, all of us, are born without acquired hates, or fears, or appetites, or loves; we learn them. We have years and years in which to learn; parents and relatives and society to teach us. Infancy and childhood, parents and society, are ours by natural right.

Also inherent in our nature is a capacity to rage. At what? At *anything which restrains our freedom.* But, you may say, our freedom is restrained a thousand times in a thousand ways and we accept restraint as though we had been born roped and hog-tied. Yes; and we boil with rage thousands of times at thousands of things we hate because we think they impede our progress, cramp our style, or clash with our cherished opinions. "Freedom" does not seem to get us anywhere.

Let us take a fresh start—an hour-old baby. Gently pinion its arms at its sides or hold its nose just tightly enough to force it to breathe through its mouth: in short, restrict the free movement of its little body. That hour-old infant gets angry. How do we know? By the way it struggles and squirms, slashes out with its feet, doubles up its fists, and gets red in the face. Its urine would show glycosuria—excess sugar in its blood. Its adrenals have put it on a war footing; it is angry enough to fight.

Mere physical restraint of its body drove it to anger. The mere pinioning of its arms was a stimulus to call out a rage reaction. The infant was enraged because it was irritated. All animal protoplasm is irritable. Rage itself did not cause its blood to boil; rage did speed up its heart-beat and its respiration, and caused other deep-seated, far-reaching changes we now know; rage also released adrenin, which heightened and would of itself produce these bodily changes. As a result, our calm little baby vegetable suddenly became a wildcat.

Suppose I repeat that performance on an infant. That rage response will become conditioned to a new stimulus. I don't have to pinch its nose now to make it angry—the mere sight of me sets off its rage behavior! That baby has learned a new trick—to change its nature when it sees me.

Its mother can show it off now. "Clever baby! See, it is smiling now. Want to see it get mad?" She brings me in; baby doubles up its fists. It cannot fight yet, but it gets fighting mad. It can use that trick to learn others. For example, it can be so trained that it will show rage when it sees my photograph or a photograph which looks like me; or when it hears my voice or a voice like mine; or reads my opinion or one like mine.

Adrenin is a marvelous drug and works magic, but do not overlook the astounding capacity of infants, children, and grown-ups to become enraged when their particular brand of "freedom" is jeopardized. What is their brand? The brand they learned to like, the brand they are accustomed, habituated to; anything in their language which hampers, hinders, or threatens to deny them what they have learned to call a right or privilege, or anyone they have learned to esteem as relative, friend, aid, ally, guide, comforter, protector, provider, or savior. Especially do not overlook the fact that your child must learn to hate the things, situations, phrases, formulæ, ideas, persons, faces, etc., you hate, before you welcome it as "child of your very own, after your very own heart"!

The emotion fear, as we saw, is twin to rage—but, like Judy O'Grady and the Colonel's lady, alike only under the skin. If I cannot run as fast as the bull—or a madman—my cowardice may turn to bravery and I will fight, and possibly prove a better fighter than I was a runner. Many a hunted coward has turned on his pursuers and fought like a demon.

Let us have the baby again; let us see how we can make it jump when we jump, scream with terror when a bat flies into the room, a mouse runs across the floor, or father scolds mother: how, in short, we can train a boy or girl in a few years to be a sneaking, sniveling coward, afraid of strangers, afraid of shadows, afraid of anything new, strange, bizarre, unexpected, or unexplored. It can be done. It has been done so often that thousands of men and women slink or shrink through life and call their souls their own only within sight or hearing of mother or within sight or sound of father. Some grow up in fear even of life itself; they look to death to set them free. Even more go through life so afraid of death they never let themselves have a chance to live.

Observe the baby again. It is sucking its thumb, at peace with all the world, without a worry or anxiety; its little chemical laboratories are busily turning milk into amino acids and sugar. I give the sheet on which it is lying a quick jerk, or I pick it up and drop it on to a soft pillow, or I slam a door, or the thunder crashes. That calm, peaceful child suddenly vanishes; instead is a terrified infant looking for all the world as though it had just received an injection of adrenin. It looks, acts, and is scared. Fear, fear of falling, fear of the noise of the storm or of an explosion, any loud noise, moves it to look and act scared.

No other stimulus will move an infant to exhibit that fear reaction. But it can learn to react to other stimuli; it will be trained, conditioned—by parents, teachers, playmates, society. The possible damage an ignorant mother or nurse can do a child in a few days is incalculable. And there is no excuse these days for ignorance.

Situations or stimuli which bring out fear reactions become specific in the same manner as do those which elicit the kindred response of rage. I offer a child a white guinea-pig; never having learned to be afraid of furry animals, it naturally reaches for it. That is what it has hands for, to handle things its eyes see. Just as it reaches for it the door slams, or somebody—possibly its mother—screams at the top of her voice, "Don't!" Or I give the child a sudden push. Door, scream, or push, scares the child, elicits the unlearned fear response. If this performance is repeated a few days, the child will learn to fear guinea-pigs. It can likewise learn to fear any furry animal, even a fur neckpiece, a fur rug, a fur coat, or anyone dressed in a fur coat.

And so as the years pass the child grows up with its own varied but individual learned repertoire of stimuli which provoke it to anger or move it to fear.

These repertoires of learned behavior patterns become individualized for the child and the child itself conditioned negatively or positively toward almost everything in its little universe. Bodily injury or pain of any sort also becomes a great factor in this emotional organization. The flicker of a candle catches its eye; it reaches out for it; is burned. We need not say that it has learned to hate the candle or to be afraid of it, but, because of its experience, it has become negatively conditioned to the candle, has an emotional slant toward it; it does not reach out for it. If badly burned, the sight of an unlighted candle may even drive the child to scream with fear. A playing child rudely knocked over by a barking dog may be so emotionally upset that it will go through life shying at dogs, jumping when they bark, possibly disliking people who fondle dogs. These early conditioned fears may become so ingrained that they result in phobias which persist for life and mar life's happiness by closing doors to situations which might be explored with profit and interest.

Children also become easily conditioned by the reactions of parents, playmates, associates. The sight and sound of a child screaming with terror may release the fear reaction in a whole group of children.

Apply these principles to the child's repertoire of foods which stimulate its salivary glands to action—its mouth to water. Its food appetite gets "set" in particular ways. Hunger drives it to seek food; it quiets that drive with foods it has learned by experience to like, to which it has become positively conditioned.

Sex or love responses likewise become conditioned along specific lines. It smiles, gurgles, or coos when it is handled gently, tickled, patted, fondled, trotted on the knee; especially when the parts of its body most thickly beset with tactile nerve endings are stimulated—such as arms, cheeks, lips, and the so-called erogenous or love-producing zones.

There is a difference, of course, between the child's reactions due to positive conditioning and those which are built in on specific tactile stimuli. There is a difference, for example, between the child's fondness for its dog and its love for its mother, but not so great a difference as is assumed. The child at birth has no mother-love instinct; it learns to love its mother, but only if she handles and treats it lovingly—that is, in such a way as to elicit its love response. Many a child's resentment and animosity toward its father starts with built-in negative conditioning or more positive rage reactions when the father handles it roughly while dressing or washing it or playing with it.

Children also may learn to crave biologically useless foods and socially useless and sexually noxious stimuli through the same mechanisms of drives and conditioning. Such forms of behavior are learned and to the abnormal individual are as normal as biologically sound and socially useful behavior is to the normal. Such emotional states as awe, reverence, grief, sorrow, resentment, etc., and all forms of abnormal food and sex behavior, are learned behavior built in through the conditioning process on innate or unlearned behavior.

Control, then, as far as the growing child is concerned, is in the hands of its teachers and parents, especially parents. The great point is to guard the child during its formative days, as far as possible, from any and all situations which injure it or move it to anger or fear. This requires both intelligence and eternal vigilance on the part of parent or teacher. It can learn to handle red-hot pokers with tongs and pull cats' tails with gloves. By gradually introducing the child to hot pokers and cats' tails, it will learn how to deal with pokers and cats unemotionally. For "pokers" and "cats' tails" substitute anything and everything that comes within range of the child's eyes, ears, nose, tongue, and fingers.

That is what we have eyes, ears, and fingers for—to sense things with, to learn sense. The man of common sense can use his sense organs without being emotionally upset by the things he sees, hears, smells, or touches, without fearing half the world and hating the other half. But common sense is rare. We get emotionally excited when there is no need for a foot race or a fist fight. We form emotional habits which are biologically and socially useless or harmful and dangerous.

Planning, calculating, or reasoning does not require the expenditure of nearly so much energy as foot-racing or fist-fighting. We can do large amounts of so-called brain work without calling too heavily on the energy supply needed for the purely vital functions. In other words, we can think hard without robbing the viscera of their supplies; but we cannot run fast or fight hard without robbing them. But if our "thinking" worries us, we may get so emotionally upset that we can neither solve our problems, digest our dinners, nor make love to our wives.

A strong emotion not only puts our fighting-fleeing mechanism on a war footing, but our brain as well. It was all right for our ancestors to meet their crises with their feet or their fists; the victors today are neither the fastest runners nor the hardest hitters, but the cleverest, shrewdest, and wisest thinkers.

If we were trained when young to meet crises with a cool eye and critical judgment, we are likely to take crises as they come and meet them like reasonable human beings, or accept inevitable defeat without tears, tantrums, and vain regrets. But if as children we had a crisis every day, and to each responded like a bully, a baby, or a sniveling cur, we are not likely to meet a real crisis without grave injury to ourselves and grief to our friends. In short, our emotional habits are bad and useless in this day and age, or they are good and useful.

"Control," then, comes down to the matter of a well-trained, well-organized emotional repertoire: a taste for sound foods; an interest in human beings and love for a mate; a hatred of shams, hypocrisy, and every form of social inequality and injustice; fear of nothing—and with a keen and alert curiosity for everything, tempered by common sense and restrained by habits of prudence and a due regard for others' whims and foibles.

The person who runs like a deer from a mouse and faints at a shadow, fights wrong telephone calls with a six-shooter, or cries for hours and worries for weeks over a slight, an injustice, or a pain, and does nothing with hands and brain to remove the slight, injustice, or pain, is a person controlled by emotion. Such a person, like a ship without rudder or helmsman is likely to go on the rocks in a gentle breeze. No one can suffer a continuous crisis for three hundred and sixty-four days and have an emergency ration for the three hundred and sixty-fifth day, when the real crisis comes.

You have emotions. They will move you as long as you live. Do yours move you in biologically useful and socially acceptable ways? You inventory your worldly goods. Why not inventory your emotional assets and liabilities? And begin with health—the state of your "insides." If they are upset most of the time, you are likely to be upset for a long, long time. You cannot have a sound mind without a sound body, nor compose your soul in peace unless your body is at peace. And your body cannot be at peace if you keep it eternally on a war footing. Nor if you keep on falling for an ankle or a pair of eyes when a mate is required. Why do we fall for each other anyway? Because we are *moved.*

From emotions in general let us turn to certain emotions in particular; and first, why we fall for each other.

CHAPTER VII

WHY DO WE FALL FOR EACH OTHER?

WHAT on earth can she see in *him!* What the mischief did he see in *her!* Or, as the Latin puts it: *De gustibus non est disputandum*—about tastes there is no disputing; or, as we say: How they do fall!

They do fall. They see that which makes them forsake friends, disregard family wishes, disobey parents; change their religion or nationality; or even turn their backs on all they have held dear, to marry, elope or run away with the man or woman she or he falls for. And the disparity between what we know him or her to be and what he or she appears to be is often so great that we exclaim: How on earth *could* they do it! What in heaven's name *could* they see in each other!

And now and then there comes the more serious tragedy of a man or woman abandoning wife or husband, and children, friends, associates, business, everything that would seem to make life worth living, to go off with a member of the other sex. As a rule they are not ignorant people; they know that such abandonment leads to disaster. At any rate, they should know it. They know that for every case they ever heard of where such an affair turned out half-way satisfactorily there are a hundred that have gone on the rocks, with one or more lives lost.

Are they driven by an irresistible force? It would seem so. A man who abandons his wife and children and in the twinkling of an eye turns his back on all that he has built up that has social and moral value cannot be quite sane; he must be driven by some force mightier than the habits of a lifetime, more powerful than all his sense of duty and responsibility.

Shall we call it love? Why not?—I know of no other name for it. Physiologists may be able sometime to give us a description of love in terms of biochemical affinities and bioelectrical forces and tell us that the man of responsibility, probity and family who falls is no more morally responsible than is a falling meteor, and that even though the man burns himself up in his fall as does the meteor, his fall may be regarded simply as one more event in the infinitude of events of cosmic history.

We have not reached that stage of analysis of human behavior yet, but we know the physiological processes involved in falling in love. We know that while marriages may be made in heaven, the particular party you or I fall for is pretty well settled here on earth, and most of it is settled for us before we reach the falling age. Our grandparents knew that as the twig is bent the tree inclines, but not until recently has it been known definitely that our choice of a mate becomes restricted fairly early in life.

Thus, to continue our figure, as we understand the tree inclines thus and so because that is the way it was bent as a twig, we now know that "he" is drawn to "her" because he had already been pulled in her direction.

I do not mean to imply that this business of falling in love is simple. There is nothing simple about it. No two persons on this earth are exactly alike, no two marriages are alike, no two people fall for each other for the same reason. Love is a force, but in the love of a particular man for a particular woman are inconceivably numerous factors, many of which seem to be of the most trivial nature. But, as I have said, the net result of all these factors combined may be so great that at times it carries a lethal charge.

The earth is always generating heat and is always in motion; the heat may be dissipated in an explosion which wrecks a mountain, or in a quake which hurls mountains down. Even as a volcano or an earthquake can be destructive, so love can be fatal.

Love is the most wonderful thing in the world of higher organisms; the higher the organism, the greater the power it seems to have in its elbow. Our business is to analyze it as it is in the world of human affairs. We shall not speak of it in terms of ecstasy or of wonderment, or in the traditional formulæ of the lyric poet or the biochemist, but in terms of human beings of many parts or mechanisms, certain of which are responsible for the propagation of the species.

What we particularly want to know is how these parts can get so set in their ways that you or I could not possibly fall for the man or woman our sister or brother falls for. Or, to put it another way, we want to find out how it is that that part of our inheritance which is charged with the immortality of the race can get so set that we will possess "him" or "her" even if it kills us.

But before we deal with mechanisms, let us see how it is that while our loves or predilections get set for specific physical features, traits of character and personal mannerisms, experiences can come into our lives which wipe out, as it were, whole categories of the opposite sex as potential mates or sweethearts. These experiences are not necessarily confined to childhood; they may come at any time during our life.

For example, as a young unmated man I might walk down Fifth Avenue receptive in general to the fair sex and particularly ready to respond to certain stimuli of sight, possibly of scent, and of ear; but because of an experience which has already come into my life it will be practically impossible for me to be attracted by any woman, however much her face, her perfume or her voice might appeal to me, if she is either a tall woman or a fat one. Just when or how I got set against tall women I do not know. I know only too well why I could not become enamored of a fat woman. The reason is not pleasant, but it is illuminating.

It was my fate to have assigned to me for my first dissection in anatomy in the Harvard Medical School the viscera of a very, very fat woman. The details are unpleasant. One sentence will cover the case: for three months I floundered in fat. But I must add that the only thing of no possible interest to an anatomy student is fat. It is more than excess tissue: it must be picked out before muscles, tendons, nerves, blood vessels and vital organs properly can be laid bare and examined. By the end of three months fat had become a nightmare, an obsession; it was emotionally tied in. It moved me to anger, and I came to loathe it.

Of such are the trivialities which can make Cupid turn away his eyes and lower his bow.

Now, my acquired prejudice against fat is not specific for all or for any fat people, nor even for fat women—it is only specific in that it removes all fat women from my repertoire of possible mates. I could not and I cannot conceive of myself falling for a fat woman, however attractive she might be otherwise. Nor is this prejudice an infantile hangover—nor is it "unconscious," nor "subconscious," nor any other Freudian mystery; it springs from an adult, open-eyed, wide-awake experience.

That dissecting room did another thing for me. As most of the cadavers that find their way to the stone slabs are emaciated, I came to regard emaciated people almost as dead people; I came to have a certain set against them, as it were. Nature normally beautifully upholsters the human frame; without that upholstery of healthy muscle and smooth, flawless and naturally pinkish skin, the human body has lost something of its natural charm—it does not seem so vital. I could not fall in love easily with a thin woman.

A fat woman, of course, may be a paragon, and a living skeleton an intellectual giant, but no normal human being falls in love with a mere paragon or with mere intelligence.

What is normality, in man or woman?

Well, biologically speaking, any man who mates with a woman and accepts the responsibility of fathering a family is normal, as is any woman who mates with a member of the opposite sex and assumes the responsibility of maternity. Any man or woman of marriageable age who is unmated is biologically abnormal; as is any man who hates all women, or any woman who loves one dog to the exclusion of all men.

But note, please, that in this article I am not concerned with abnormal outlets to the mating impulse. Even animals in unnatural surroundings may resort to unnatural practises and thereby become perverts. Our civilization affords innumerable abnormal outlets to the mating impulse. In fact, in some occupations or professions normal sex conduct (marriage) is held in such low esteem that it hinders advancement or actually disbars. Women school-teachers, for example. With such perversions I am not dealing, but rather with why this or that man falls for this or that woman or vice versa.

We can admire paragons and respect intellect, but admiration and respect do not satisfy the natural mate impulse; we fall for or mate with a member of the opposite sex.

This impulse is an *impulse*—it pushes on, impels, incites;

it is not a figure of speech—it is a fundamental, biologic force, and only less vital than the impulse to eat.

Normally it drives us to seek a mate—as food hunger drives us to seek food. *It* drives *us*. Under that drive we sally forth to find a girl to our taste, food to our liking. But which, what? We must look at "it"—what is it that does the "tasting" or the "liking"?

Why could Jack eat no fat and Mrs. Sprat no lean? Simply because Jack did not like fat and Mrs. Sprat did not like lean. Behind Jack's dislike for fat was presumably a stomach which had no key to unlock a fat molecule—or perhaps it had once had but had lost the key. Fat in his alimentary canal did not become glycerine and fatty acids but remained fat—and rancid at that. He could not digest it; he could not get the energy from it which would help him satisfy a biologic craving; he could get no good out of it; it did not make him feel well. He just could not eat it!

What makes you feel well? I know that is a foolish question and that if you were to answer it in full you would have to recite a hundred thousand years of human history. Just the same, we must have at least the gist of an answer.

And the gist is this: Anything can make you feel well which you have learned to like. It cannot be said too often that man is naturally fitted to learn; no beast of the field is born dumber than man, no beast can learn as much as man. And yet a dog's mouth can be taught to water when his hind leg is shocked with electricity, and he can be taught to tuck his tail between his legs and run like a cur when he meets a female of the species seeking a mate.

In short, just as man is vastly more teachable than a dog, and as a dog can be taught abnormal behavior respecting both food and sex, so the human being can learn any kind of behavior. But note that the behavior which a human being learns is for that individual normal. You feel well when you get what you learned to want.

You are seated at an empty table and are very hungry. I place before you ten dishes, each properly prepared, naming the food on each dish: snails, frogs' legs, Limburger cheese, grubs, devil-fish, brains, tripe, blood pudding, snake, human flesh. Your reply to some of these dishes—possibly to all of them—would be, "I'd rather starve to death than eat that!" or, "I couldn't eat that to save my life!" And your reply would be sincere—but not necessarily truthful. Circumstances alter cases, as we shall see.

What on earth can she see in him? Just exactly what a hungry Solomon Islander sees in a piece of "long-pig," or a hungry Arapaho sees in a dish of buffalo blood pudding: something that makes his mouth water. Nothing on the above bill of fare makes your mouth water? Yet everything on that bill of fare is good nourishing food—if you can eat it. You cannot eat grubs: a hungry native of Australia would walk a mile for a grub.

The man she fell for looks like a lounge lizard to us. Why did she fall for him?

Our stomach must have food or we die, but the food we eat is the food we learned to like; certain specific dishes prepared in certain specific ways—and generally like Mother used to make. Our need for food is biologic and fundamental. But the appetite through which the food-hunger impulse is adjusted becomes specific for you and me and for everyone.

One step more. The babe knows nothing of food. Hunger drives it to fretfulness; it is given food. But its organic need will be satisfied only when it is offered food that it can swallow and digest. Given such food, the organic need is met; the baby feels well. How do we know? By its actions:

it was restless; it is now peaceful; it may even smile and coo. As time goes on it learns to like certain foods. Its hunger is innate; its appetite is acquired.

The youngster's *appetite* can, of course, be turned into abnormal channels. Its salivary glands may become so conditioned that they water for things which have no food value or which are really injurious.

It does the dog no good if its mouth waters when its leg is given an electric shock, but that is one of the things the dog's mouth can learn to do. Its salivary gland normally waters when it is hungry and sees or smells palatable food. If its leg is given an electric shock every time it is hungry and sees or smells palatable food, its salivary gland will soon learn to respond to the shock alone—there may be no food within a mile. Its appetite has thereby become conditioned to a new and biologically useless craving.

The physiologic principle behind this fact is of prime importance in finding out why, for example, a man could desert wife and children and take a viper to his bosom. We learn to fall for a particular "him" or "her" as we learn to like this or that dish.

But, I repeat, circumstances alter cases. You say you would rather starve to death than eat grubs. But would you? Did you ever try starving?

The man who embraced a viper may have had an abnormal appetite, or he may have been starved. He probably said "starved." Or she may have been a vampire. We must be prepared for anything—the unexpected or the seemingly impossible, for we deal with the two fundamental drives not only of human beings but of all higher animal life.

But there is a fundamental difference between these two drives. A child can learn to crave lead-pencils, or chalk, or even earth, but no child can live on graphite, chalk or earth

—it must have food or it dies. It may gratify its appetite: it *must* satisfy its food hunger. That same child later may gratify its mate hunger through an ideal, an interest, anything but a mate; the individual does not thereby die, however abnormal or revolting such behavior may appear, but its strain dies.

The unmated, of course, fall for something. They do not fall for a mate because they are in love with themselves or because their natural mate love has been diverted into love for money or power or literature or science or for any one of many strange things without biologic ends that human beings fall for to gratify their cultivated tastes.

Nature, as I have already pointed out, has a way of permitting such adjustments, not only in man but in other high animals, under a state of civilization. Hundreds of thousands of women today remain unmated because they belong to a society which, though tolerant of deadly wars among males, hounds mothers who comply with nature's law but disregard one made by man.

The biologist has given us such light on the mechanisms of species propagation that the human race, if it chooses, has a kind of control over the future it never had before. We can today, in short, build human bodies and human society in a way they could not be built before, because we begin to understand something of the nature of the building blocks of the human body, how they are put together, how they develop, and of the energy which keeps us going as an individual and as a race.

Our food hunger learns to be gratified with only certain kinds of food. What kinds? The kinds we as individuals have learned to like.

For example, you are hungry and I place before you a dish of food which you have never seen before; you have not the faintest idea how the food tastes, whether it would tickle your palate or satisfy your hunger pangs. Do you begin to eat it? Not necessarily. You may exclaim: "Take it away. I can't bear the sight of it!" Which means that your experience of food which looked like that was an unpleasant experience and made you sick.

Or again, you may be hungry and want above everything else some fresh fruit. I place before you a durian, one of the most delicious fruits in the world—if you like it. Do you try it? Quite likely you become prejudiced against it the moment you see it because it looks like a closed-up porcupine; and if its appearance does not offend you, its odor will. You exclaim: "Take it away. The smell of it makes me sick!"

From which it appears that you satisfy your hunger only with such foods as you have learned to like through eyes, nose, and fingers—especially through your nose; although for many people sight plays a larger rôle.

Why talk so much about food-hunger? Because its vocabulary is precise and because it can be talked about in mixed company. Further, we all succumb, and generally three times a day, to the food impulse; we do not necessarily gratify the mate-hunger. Translate into the realm of the mating impulse all that has been said above as to how you and I learn specific ways of satisfying our food hunger. But the translation must not be too literal, and it always must be understood that while you and I must eat, we need not necessarily mate.

But as that mating impulse is fundamental for the life of the species, it must be a very powerful impulse. If we do not mate, if that impulse is not normally satisfied, what becomes of it?

If a well-mannered dog can learn to flee at the sight of a member of the opposite sex looking for a mate, surely there no longer need be mystery in the fact that there are thousands of men and women who never mate, or that some particular friend of ours falls for some member of the opposite sex so utterly unattractive to us that we can only exclaim, "As for me, not in a thousand years!" To that learning process in human beings we now turn.

The parts of our body which correspond specifically to the hunger mechanism are, to use Havelock Ellis's phrase, the erogenous or love-producing zones. These zones at birth have their complete complement of nerves. Just as under certain conditions the stomach drives one forth for food, so under comparable physiological conditions one is naturally and normally driven to satisfy this other hunger.

The infant's body is thickly beset with nerve endings, some parts more thickly beset than others; gentle stimulation, patting, rubbing, etc., elicits a smile, a weak love response. Just as in the training of the appetite the responses become conditioned so that only certain categories of food are acceptable, so the touch organs in general of the human body, and the erogenous zones in particular, will acquire habits. These habits will result from experience. This experience may become conditioned through eyes, ears and nose, and in fact through all our sense organs. As our salivary glands can be taught to water when we see or smell certain foods, so we as individuals learn to love through sense organs other than tactile.

For example, the mother or nurse fondles the child every time she picks it up, trots it on her knee; and especially in bathing it handles it gently. Such handling pleases the child; it learns to love to be fondled; it learns to love the hand that fondles it; it learns to love the face of the person who fondles it, no matter what the color of that face or what its features may be. The longer the child is fondled by one particular individual, the more its love for that individual will be tied in.

Here, then, baldly stated, is the foundation on which we build our repertoire of possible mates; but you must understand that it is merely a rough statement. The experiences that are inevitably encountered by every boy and girl in twenty years number close to infinity. They never can be the same for any two individuals; that is why we inevitably differ from each other.

Our mate impulse has a long history behind it, in a way as long as animal life on earth. It is a powerful impulse, and the fact that there are more human beings in the world today than there have ever been before, in spite of all the degradation that has been heaped on Cupid, is proof enough that this impulse must be obeyed. How it is obeyed at any particular time depends on its previous experience.

I spoke of the factors which elicit love responses as being inconceivably numerous. They really are. But in this connection we should take into account a psychologic factor of enormous importance in determining our behavior. This factor, for example, will help us understand not why he fell for her but why it is that he did not fall for her five years ago if he was going to fall at all. Call this factor the general situation.

We get a first-class illustration of it by harking back to food. You turn up your nose at a durian, but I can easily conceive of your getting so thirsty you would be driven to eat the durian for the water in it, even though you had to hold your nose.

Consider again the case of the man who walks out of a respectable home, abandons a seemingly lovable wife and adorable children, and flees to parts unknown with a vampire.

He may have seemed to his neighbors as firmly embedded as a rock: he may have been balanced on a center of gravity not visible to the community, and was toppled by—what? It takes two to mate. How strong was the wind that toppled him over? Only as we know her force and all the factors in his life which made him susceptible to such a force, can we find our psychologic answer to why he fell for her.

Apply this "general situation" idea to the apparently startling change that often takes place when our boys and girls leave home for college. They have grown up in the midst of taboos. They have been told that certain fruits are absolutely deadly—under no circumstances may they even look at them, and they learn to drop their eyes in their presence.

It is different at school. They discover that the taboo is violated without loss of life. Boys whose characters would be regarded by the home folks as impossible are discovered to be acceptable members of college society. In consequence, many a girl falls for what her father would stigmatize as a dude or a dandy; and he wrings his hands that his daughter ever should fall for such a specimen of humanity! The neighbors too may wonder how she could do it. But fall she does.

And we may be certain that there was that in the young man which found favor in her eyes—or possibly in her ears: she may have learned to love a voice like his. She may have learned to love that particular kind of voice when as a child she was dandled at her uncle's knee.

Note, too, that he need not necessarily have been a prodigy in any one or any half-dozen of the things she had learned to love. He may have been very ordinary. Much of her fall can be attributed to mere gravity because she was ready to fall and it took but a passing breeze to jar her loose. Or it may have been that she was not at all ready to fall—he may have been a whirlwind.

We know why people fall for each other when—and only when—we know all the circumstances, the circumstances which have brought them together and the experiences they have had which have made them what they are. Even then the disparity between his or her fall and what you or I would fall for may be so great that we still exclaim: "I wonder how they fell for each other!"

Is it not plain? They fall for love. The "love" may be big or little, rich or poor, old or young; or a look, a smile, a dimple; an ankle, a mouth, a chin, a forehead; virility or anemia; a wisp of hair, a hand-clasp, a light in the eye; a ring of the voice; someone to pet, nurse, protect, comfort or save; or opportunity—to go, be, do, have, climb or escape; or a cross or a crown; or a meal-ticket, a motor-car, a mansion, a yacht; or a cook, nurse, chauffeur, housekeeper, clothes-horse, or a foil.

We wonder. But the most wonderful thing in this world is love—love of man for woman, love of woman for man; nothing else can be so lovable, nothing else can be so perfect. No other relationship can be so beautifully, normally, naturally and eternally complete. It is of all human institutions the most ancient and the most honorable; it is the keystone of human families, which are the pillars of all human society.

That relationship is founded on nature's cunning contrivance that the two sexes should look good to each other, that some man should find favor in some woman's eyes. Anything which tends to thwart nature's plan is potentially destructive of the human family. With disintegration of the family, human society becomes a pack of wolves or a madhouse.

If our parents had not fallen we could not have risen.

The least we can do is to be charitable to lovers, and the least we should do is to train our children so that when they fall they will fall for a real mate. We shall then have no need to help them up. Any pair of properly mated human beings have nature behind them and are not likely to fall for every passing fancy, or fall out with every passing form.

We do seem to do a lot of falling in our lives—falling hard for a few, falling out with too many. And the original "Fall" probably has nothing to do with the case—certainly nothing that I can see with our falling out with each other. Well, then, why do we?

CHAPTER VIII

WHY DO WE FALL OUT WITH EACH OTHER?

THEY may talk about their big stars and little electrons, but the world you and I live in is made up of human beings just like ourselves. If we do not fall for them, they fall out with us.

It is all very fine to learn how Henry Ford made a billion and why Napoleon met his Waterloo, but what you and I *must* know is why we were not promoted, why we were fired, why brother Bill will not speak to us, and why our wife cannot keep a cook. We live discrete lives, our problems are concrete. On our ability to get along with wife, husband, parents, children, friends, associates and society hangs the difference between Heaven and Hell on this earth.

Why do thousands of people quit their jobs or get fired each day in New York? Because they do not like their work or cannot do it? No; because they cannot get along with somebody or somebody cannot get along with them.

Here is a letter from a school-teacher. She has lost her job three years in succession; fears it is getting to be a habit; and what can she do about it? She is a competent teacher—no complaint on that score. The children all like her—that is a good recommendation. Why lose her job, then? Because out of school she prefers working alone in her study to visiting parents, becoming a member of the community and entering into its spirit. They called her stuck-up and thought she was trying to "high-hat" them. They would not let her get away with that.

The personal equation. She might have been a wonderful teacher; she might have inspired genius itself. Not enough —she would not mix.

Thousands of people are fired every day because they are not good mixers. And what is the answer? Well, I suggested to the school-teacher that she look for a community which wanted a teacher for its children rather than a pacifier for its parents. I thought she could find such a community more easily than change her personality.

To give up her work and surrender her personality to become one of the community might have made a moron of her for life. Men are more prone than women to pay that price. But to lick the boss's boots just to hold a job is to sell oneself too cheaply. One cannot go on groveling in the dust or submitting to humiliation without becoming a common cur or a Uriah Heep. Our school-teacher might have held her job, but at the price of her soul. Getting fired may have saved her for life.

Many a man grows so fast to a job that he loses his identity and becomes a mere bump on a log; if he had been shaken loose a few times, or kicked into the middle of the street, he might have saved himself. You and I know many people who have gone through life on one set of habits because they never had to form a new one. They can never build anything bigger than a hen-coop or a dog-house because they never laid a foundation for anything bigger.

There is another angle to that school-teacher. Firing her saved the community's face and her independence, but if she had been a really great teacher and had known how to turn a temporary sacrifice into a lasting gain, might she not have got under the skin of those moron parents and succeeded in getting the "old idea" as well as the young interested in learning how to shoot? It would have been a tough job, of course, and more than should be expected for sixty-five dollars a month. But it has been done. There have been such inspiring teachers. Of such stuff were the great leaders of all movements that have made life more livable. That is what inspiration means—we outdo ourselves, we are so full of "pep" that we can warm others.

"Couldn't get along with." Did you ever fire a stenographer because he was too efficient? I did, years ago. He was a Yale graduate. Perhaps that was why I hired him—it was one of the reasons why I fired him. Why a full-grown man with a Yale A.B. should take dictation from me worried me. I needed efficiency, but I myself could not be efficient when worried. If he had only been a humpback or had had only one leg or had not been so inhumanly efficient!

His ability to guess what I meant to say or what I had intended to write was uncanny. He had express speed, deadly accuracy, was prompt as the clock, and his conduct otherwise was irreproachable. Efficiency—yes, I had to have it, but the man was so much more efficient in his job than I could hope to be in mine that he froze me! He was just as human as an ice-machine.

It is the business of a refrigerating machine to keep on the job and make so many pounds of ice on the Fourth of July and so many pounds on New Year's Day, but it is not its business to look surprised if you shut down on the Fourth, or to be pleased if you run it overtime on New Year's Eve. You expect certain things of a refrigerator. You expect certain things of a stenographer besides efficiency. When you give him an extra holiday you expect him to smile. When you ask him to work till midnight on New Year's Eve you expect him to frown. That stenographer could neither smile nor frown. That kind of conduct I might tolerate in a butler, but I fall out with it in a stenographer.

I have not yet been president of a bank, but I suspect that in such a seat of the mighty eighty per cent efficiency and twenty per cent human being who would not strain my eyes might be preferable to one hundred per cent efficiency. But I should certainly expect one hundred per cent efficiency in my teller, and at least enough personality so that he did not make a depositor feel the bank was doing him a kindness in accepting his money or give the impression of doing a favor to the man who was getting a check cashed. In other words, I could put up with a teller I did not like if he were an efficient teller.

Do you remember the Robots—those synthetic, superhumanly efficient mechanisms that looked like human beings? Could you work beside one, or have one about your house or in your office? If you were alone in the middle of the ocean with a Robot that could row, would you keep it?

I think I should prefer to play a lone hand. I could talk to myself, my ears would hear my voice, I could answer back, and I could move myself to greater efforts or compose myself to meet peacefully whatever fate had in store for me.

Alone, I could do that with a certain amount of equanimity; I could not do it with a Robot.

I should have to throw it overboard lest I go mad.

Could a stenographer work for a Robot? I know what I should demand of a bank president if I were a stenographer: one hundred per cent efficiency. If he were human, so much the better; I could then warm up to my work, put my heart as well as my head into it. And that combination goes far. But if he were inefficient, negligent of his duties, toyed with his responsibility or lacked real ability, even though he were the most lovable employer conceivable I should have to fall out with him.

But if he were on a vacation and wanted to fish instead of answer his mail or wanted me to take care of it, well and good—I'd do my best. I expect certain behavior from a bank president; I am prepared for anything from a rich man on a vacation.

We acquire habits of expectancy. We learn to expect certain specific kinds of behavior from certain people or categories of people: when they behave otherwise we are upset; if we feel we just cannot stand their behavior, we fall out with them.

Habit of expectancy. For example, last June I met an old and dear classmate in my home town. As boys we were great friends, helped each other with our mathematics and worked out our Greek from the same "pony," belonged to the same literary society, the same "frat" and the same "gang." He was a good sport, a good debater, a good poker player. He could talk of Helen of Troy as well as Helen of Cincinnati. We had had great times together, we had fallen for each other.

We had not met for nearly forty years, yet after five minutes' talk we were at a standstill. He had gone in for real estate and loans—fine business, but over my head; I had gone in for mummies and such—all of which was over his head. Tut-ankh-amen meant nothing to him, much to me. He knows all he wants to know, but hasn't got all he wants; I've got enough, but know so little of what I want to know that I feel as poor as he thinks I am. We meant nothing to each other, had nothing in common except ancient history. We did not fall out, we just fell off, and were like strangers to each other.

If the child, as Wordsworth said, is father to the man, how much more so should the young man be! I liked that *young* man; the *man* leaves me cold. But suppose he had spent forty years as missionary in Tibet, or forty years as trader in Samoa, or forty years as trapper in the Yukon: I should have had a thousand questions to ask him, and our friendship would have spanned the forty years in a day and been born anew. Not necessarily, of course. We might have fallen out because he had turned his back on science, or because I preferred Darwin to Moses.

Some years ago I returned home from a three years' trip around the world. Where would I like best to live? asked the local banker, expecting me to say Granville, of course—or at least some U. S. A. city. "Peking." His face showed his disgust—to name Peking was unpatriotic. He fell out with me then and there because I had betrayed him. Anybody who could prefer Peking to Granville, Ohio, must be queer. No queer or unpatriotic people on a banker's list of friends!

On a slow boat to Bombay in the off season was a dark-skinned, black-eyed fellow countryman on his way to India to study cotton for the Department of Commerce. He was from Georgia and I suspected he had a tinge of negro blood in his veins, but as we had a Harvard degree in common and were together for twelve days we became good friends.

We met two months later in Calcutta. I had just returned to the hotel from a long talk with Lord Sinha, a native Indian and one of the blackest men I have ever met—and one of the ablest. He had had an English university education and was the first Indian on the Viceroy's Executive Council. We had discussed politics for three hours. His knowledge had astounded me and his cleverness in argument amazed me.

I turned my admiration loose on my friend. He was not interested; he was "astounded" that I should spend an afternoon with a "nigger." We fell out.

Just because I was enthusiastic about a black Mohammedan? No; because he himself was not one hundred per cent white. He could make himself so by pretending to be one hundred per cent anti-black.

It had taken us days to fall for each other—as many minutes to fall out. But in the circumstance which caused our falling out I found new interest in him. I had not met hat kind of specimen before. If I could not keep him as a friend, I could add him to my collection.

X was a man of about forty, his wife about fifty. I knew them intimately for years and rated them among my dearest friends. They were devoted to each other, but they had no children and he wanted a child. She went through a Reno divorce smilingly, but suffered grievously. And he married his ex-wife's cousin.

I went abroad. Returning a year later, I plunged into a long bit of work which took up my time to the exclusion of all old interests and friends. Meeting X by chance, I was as usual prepared to embrace him, but he seemed so cold that my greeting died and after a short desultory talk we parted. I haven't seen him since.

What happened? He resented my not having exerted myself to show my friendship for his new wife.

He should have known me well enough to know that I could have had no intention of doing that, but he had his lightning-rod up and was looking for trouble. His wish for a child was born of the wish to be free to marry a younger woman: he was not certain that he had been justified in breaking with the old wife and he was touchy about my attitude toward the new. My seeming slight of her reflected on the whole affair of his divorce and remarriage.

Call it supersensitiveness. Ordinarily nothing could have come between X and me, but a new factor had come into his life, and my negligence, which should have passed off with a mild reproach, became a reflection on his conduct. He fell out with me over an incident which should have been trivial but which in the altered circumstances proved to be critical.

Love me, love my dog! And if my dog is of questionable ancestry, insult it if you dare! Little Mamie may be as homely as a mud fence, but truth on that point is not likely to make a hit with Mamie's mother.

There really are so many reasons why we fall out that no two fallings-out are alike. But behind every reason is a human being encased in armor with from one to thousands of holes. Prick him in any hole and he is wounded; in certain holes, the wound is fatal to friendship. And what a falling out there can be when our vanity, pride, self-esteem, "honor," is pricked! Battles, with words or fists, duels with pistols; even murder.

Suppose that Southern gentleman had been a woman. That introduces a new factor. This world you and I live in is not a world of human beings but of boys and girls, men and women.

There has always been a sex problem, presumably, but our mechanical age has thrown up a new one: men working for women and women for men, as though they were all machines working for machines. Thousands and hundreds of thousands of women in our cities spend six, eight, ten hours a day with men, and are presumed to forget that there is any such thing as sex.

And that is not easy, because sex is an ancient institution and nature spent millions of years in cunningly contriving to make the two sexes look good to each other. And so they are—except to the abnormal—and so they will remain. Would girls leave kitchens and other so-called domestic haunts for counting-houses, shops and even boiler factories if there wasn't a man in sight?

We may learn to shut our eyes to the fact that there is a member of the opposite sex in sight, but we need not blind our eyes to the fact that nature is not fooled even though we are. The Phi Beta Kappa woman may be as cold as a cake of ice, and the head stenographer may have the instincts of an old maid—for human beings can get that way—but the average girl who shines in classroom or office certainly does not hate her teacher or her chief. If she really loves her work, her teacher or chief is probably lovable.

While the two sexes are naturally mutually attractive, members of the same sex need not seem attractive to each other. It is a rare woman who can put all she has into working for another woman. Women are natural rivals, as are men. As boys or as girls we learn certain norms of behavior toward members of our own sex, and become so conditioned that as men or as women we can easily fall for certain other men or women. These friendship norms among members of the same sex are easily disturbed when the situation becomes bisexual.

Girls learn to compete with each other in classrooms, in games, et cetera, but while acquiring these habits they form other habits which make it easy for them to become the partners of men in the game of life, or to work with or for men in life's business.

As boys we learn how to get along with each other, but firmly embedded in our cultural background is the idea that "real" problems and "great" tasks are man-sized jobs. We assume and assert that men are the "natural born" leaders, and that there are certain pursuits which women just "naturally" cannot follow. Some men even yet assert that women are inherently inferior to men in all respects but one, and even in that respect men have not given up without a struggle. Zeus mothered Pallas Athena—and full-fledged, mind you. And some tribes still practise the *couvade*—put the father to bed for a couple of weeks to be waited on by his wife carrying her new-born child!

You and I, as males, may be quite convinced that for all the eye can see, the ear hear or history reveal, women can be as clever, competent, efficient, brave and intelligent as men, but you and I grew up in a society which pretended that they cannot; we learned to treat them as inferiors. We cannot easily work for them.

I know a man in New York who was never promoted to the position of general manager of a big concern because its president was a woman; he just could not take orders directly from a woman. Everything in his upbringing made such an idea revolting. He grew up in a household where the relation of man to wife was what some people ignorantly believe prevailed in Stone Age times. His mother not only never gave an order but never dared express an opinion. "Take orders from a woman? Not I! I'm a *man!*" And the louder he shouts it, so much the less is he a gentleman. No little man can soldier with a woman.

Occasionally a man may fail of promotion because he gets along with things better than with men. He may know the business in and out; he may be master of every detail of the organization; he may work hard for it; but, promoted, he would be working for the man higher up. He was a tinkerer as a boy, working by himself, working out his own ideas. He never took an order from his father, never learned discipline, never would make a good soldier.

Both cases just cited deal not with dislikes but inabilities.

The man who was not made an executive might like the woman president, but he could not work for her. The man who knew the business and liked it might like the head of it, and outside they might become friends; but he just could not take orders from him.

Habit, habit, habit. We easily see what habit does for us on the golf-links or at the bridge table. We learn a game, learn it well; if we learned it really well, we pick it up again quickly after disuse. We also easily understand how habits in the matter of food, for instance, become part of us. We learn to like salads of certain kinds, but few of us have learned to eat any salad with a hair or a worm in it. It may have taken us weeks to fall for the alligator-pear; we can fall out with it in a minute if it is rancid.

We do not so easily understand that the general sets or attitudes we acquire as children are also habits. They are the important factors in our falling for new things, situations, people. We speak of making up our mind: our mind is made up for us; all we have to do is to find out what it is. We weigh the pros and cons, talk it over with ourselves, reach a decision. The decision is new—but new only in that it is a product of or compromise between previous decisions and the present situation. Against the background of our habitual likes and dislikes we are eternally weighing new problems.

Some things we fall for easily; there are people for whom we just can't fall. When people do certain things we don't like, don't approve of, that "make us sick," "turn our stomach," we naturally fall out with them. I may say, for instance, that I fell out with a certain man or woman for a specific reason, but each one of us, as a matter of fact, has whole categories of things we don't like, things we disapprove of, things we "hate," things we "can't stomach." Our attachment to a friend, our love for a woman, may be great enough to weather a storm; it might not survive an explosion.

Marriage can go on the rocks for so many reasons that I hesitate to speak of it at all, but the fact that married couples do fall out gets them in our picture. And the mere mention of the word *marriage* seems to call out the word *divorce.* Divorce is more universally common than ever before and has become fairly common in social groups which formerly held that marriage meant a life sentence.

Every marriage is an affair between two unique individuals—"unique" because of the countless experiences and incidental factors of cultural conditioning and parentage which go into the make-up of every personality. Love—sexual love, if you please, love of a man for a woman or of a woman for a man—is the great "ground" for marriage, yet in thousands of marriages that old-fashioned element has become buried miles deep, the real ground being convenience, business, a means to a definite end, the carrying on of the family name and tradition, an escape from some condition, the solution of an economic or social problem, or merely a new or another adventure.

Not infrequently, couples who might be presumed to know better marry because they have nothing else particularly interesting to do at the time; they marry as they would go slumming, or go up in a balloon, or go to Paris as a stowaway—for the fun of it, for the excitement of it, for the novelty of it. They have kept saying to themselves, "Well, I'll try anything once"; and they try marriage.

That there are thousands of unmarried adults simply means that life as we live it today holds other ways than marriage, or even than mating, whereby the mate impulse can be adjusted. Since the war, of course, marriage has been an impossibility for hundreds of thousands of women in Europe simply because there are not enough men to go around. Bigamy is banned by law; adultery, by society.

But as the natural ground for marriage is love—the impulse that springs from an organic need to satisfy the mate hunger—so the original ground for divorce is sex incompatibility; and that can take many forms. Married people often fall out with each other merely because they don't like each other any more. There need not be hatred or coldness or the fact that the one who does the falling out has fallen for someone else, but I suspect that in most cases, in divorce as in marriage, the primary factor relates to the adjustment of the mate impulse. But a triviality, a mere incident, whim or fancy, may lead to marriage; the cause of the falling out may be as casual and biologically meaningless.

In extreme cases the man or woman falls so far out with the idea of remaining married that anything, even death, is preferable. I once heard a woman declare that she felt she just had to break with her husband or go crazy. Most of us could face self-annihilation sooner than that.

It would not be so serious if we just fell out; it is the depths we fall into. No angel could fall farther than we can.

To illustrate. You and I have been good friends for ten years, let us say. Our social group knows us as good friends. Our community recognizes us as having common interests, congenial tastes; we have many things in common—friends, books, pastimes. And we suddenly fall out. The cause may have been an utterly trivial matter; it may have started over an argument as to the kind of bait a President should use in fishing for trout; it may have been your dislike of my new golf suit; or it may have been a disagreement as to who won the war. But whatever it was, one or other of us feels so aggrieved, injured, snubbed, slighted or belittled, in person or in opinion or in belief or in politics or whatever it may have been, that we not only fall out but one of us tells the other where to go. You tell me, let us say.

The community, of course, learns that we have fallen out. What will be your attitude toward me? Isn't it fairly certain that henceforth all that I am, all that I do, will be adjudged wrong in your eyes? Isn't it asking a little bit too much of human nature to expect you to find any good in me? Are you not going to find as many reasons for hating me as the Allies recently found for hating the Central Powers? Everything should be fair in love; nothing can be fair in war. You will not be too discriminating in finding reasons for hating me, or too nice in expressing them.

And why? You must justify the fact that we have fallen out: the more reasons you find for hating me the more easily you justify to yourself and to the community the fact that we, who were once friends, are now enemies. For every concrete reason that you could have given for our friendship you can now find a dozen to justify our enmity.

In other words, mere ignorance of our enemies does not stop us from justifying our hatred of them—our imagination will furnish the reasons. It is the knowing so much that is not so that makes it difficult to patch up fallings-out amongst friends and restore friendship between nations that have ended war with peace.

It is not because we fell out or because of what we did to each other in the heat of battle; it is because of what we said about each other behind each other's backs. I may forgive you for the black eye you gave me; it will be harder to forgive or forget your added insult—"*why* did you kick me downstairs!"

You may have had no reason but unbridled anger, a blind passion no more yours by inheritance than an abject fear of ghosts or dislike of being called a coward. You were not born a bully or a coward, but you could learn to be both, and to become clever in justifying your acts with words.

Or you may bear your grudges silently and your dislikes without reason. Pressed, you can only say, "I do not like you, Doctor Fell; the reason why I cannot tell, but this I know, and know full well, I do not like you, Doctor Fell"; and then you are hopeless. The man who permits his viscera to usurp the rôle of brains is ruled by passion, blind, ignorant, stupid. We may pity such a moron, but we cannot fall for him, and we know the reason why.

I said "reason," but don't take that word too literally. As I shall have occasion to point out later, our reasons are generally excuses to disguise prejudices—a process called rationalization. We generally go through a similar process when called on to explain why we are in this or that business or profession or occupation. Why are we? Does our job fit us or are we misfits in our life work?

CHAPTER IX

HOW DOES YOUR JOB FIT YOU?

This business of job fitness works both ways. If your job does not fit you and I have to depend on your services, I suffer also. For example, if you are an unfit surgeon, I may suffer for years or may even pay with my life for your unfitness. You read this book at a cost of time and energy: if I am not fit to write it you waste your time and energy, and if I put false notions in your head which unfit you for your job or cause you to lose it, my unfitness may be as expensive to you as a flood.

I have had to deal today with a judge, jury, and lawyers; with a banker, dentist, oculist, bus driver, editor, grocer, stenographer, and janitor; with samples of many different professions, trades, etc. In one way or another I paid for service. Did I get the service I paid for? This is an immensely practical question and concerns every one of us in a practical way—as individuals, as parents, teachers, taxpayers, employers, employees, responsible members of society, and as men and women who would better our lot if we knew how, improve our position, or find jobs better fitted to us or which we could fit into better.

Why are you a merchant, a mechanic, physician, stenographer, lawyer, preacher, teacher, bookkeeper, or whatever you are? Did you pick your job or did it pick you, and when? Was it some mysterious impulse, or just fate? Or was it drift or mere chance? Or were you born fit? Or did you inherit some special bent, talent, or propensity which fitted you for one, and only one, job?

Obviously, if I believed in mysterious impulses I should have to stop right here and consult an oracle—some one who can talk to omnipotence. If I believed in fate I should consult the palm of your hand or an almanac, or gaze into a crystal. And if I believed in drift or mere chance, I should still want to know how the Brooklyn Bridge got there and why there is no moon tonight. But if I believed in being born fit I should want to look at your nose and feel the bumps on your head.

Some do. A lot of people take noses, chins, cheek bones, foreheads, and head bumps seriously; yes—and star, crystal, and palm "readings." I cannot take such readers seriously—they *know!* I cannot argue with them because we do not talk the same language, we do not understand each other. And so I put forth this warning: anyone who *knows* how to fit jobs to noses and can read fate in palm lines and character in head bumps, has powers so far above my head he—or she—will hardly care to come down to earth and take an excursion with me.

Then it must be inheritance. Our fitness for the stage, pulpit, platform, counter, steering wheel, or telescope, must be inherited! Some say so, at any rate. They are the germ-plasm enthusiasts. What do they know about germ-plasm? Next to nothing. That is why they are so enthusiastic about it—they can resolve any and all behavior, including jobless, imbecile, lunatic, pervert, best people, and genius, into just one word—*heredity.*

Almost as simple as reading palms. All one needs is a stud-book.

Now if the fact that I am writing this book and the fact that you are reading it can be explained by heredity, then

I am prepared to believe in special creation; but must still wonder why Adam and Eve did not build an airship, and why so many of their descendants were overwhelmed by the Flood.

It is too simple. Heredity does not work that way. The most that any two human beings can beget, or are ever likely to beget, is an infant without shame, pride, or wisdom, but with human potentialities. Does that infant's ignorance, or its capacity to learn, or its fitness for a job or a profession, differ from that of a Cro-Magnon infant of 25,000 years ago? *There is not one shred of proof that it does.* No man alive can paint a better buffalo or chip a better flint ax than did our cave-man ancestors; nor is any human being living wiser as to first or final cause.

None of us is innately equipped to know his world any better than our ancestors were; our inheritance has not changed, the world has—it is bigger and more complex than it used to be.

And yet people go on speaking of the "evolution of the human mind," of "highly gifted races," of "natural-born genius," and of "inferior germ-plasm"—when as a matter of cold fact they know nothing about mind, next to nothing about heredity or germ-plasm, and cannot agree as to what constitutes a "gifted" race or "genius." Why, then, do they speak about a "natural"-born musician, or say that Jews are natural-born bankers, Italians natural-born ditch-diggers, or Bulgars natural-born truck gardeners? Because it is so easy. What lures mariners to destruction? Mermaids and sirens. Why are we so smart? Can't help it; we were born that way. Why does the Anglo-Saxon rule the earth? Clever race—destined to rule. Nothing seems simpler, or so tickles our vanity—if we are Anglo-Saxon born.

It is too simple. Scrutinized for flaws as closely as a second-hand car would be, it will not pass. Whatever it is that "runs" in families does not run true to form. Whether I was to have my father's brown eyes or my mother's blue ones may have been set in my inheritance; but whether I was to take after my mother and paint china, or after my father and paint the barn, or neither and paint the town red, depended on nothing innate in me, on nothing that has yet been (or in my opinion, ever shall be) brought within terms of structural or functional inheritance.

Well, then, why didn't my mother make an artist of me, preferably a pianist or a painter? I was as naturally fitted to paint as my cave-man great-grandfather, and to play the piano as Paderewski. I have an ear for music, but I cannot read a note. I can describe the anatomy of a buffalo, but I cannot draw one as well as a Hottentot did thousands of years ago.

Let us take a little excursion out into the country. I am one of three sons; we grew up on a farm. Are any of us farmers? Are any of the farmer boys I used to play and work and go to school with, farmers? Not one. Yet we were all sons of farmers—back to I do not know how many generations. Why did we all leave the farm? Certainly not because we did not learn how to farm or inherited less farming "talent" than our fathers.

But first note what became of these playmates. From one family alone six sons went out into the world. One is a lawyer, one a preacher, and four are college professors. Of another near-by family, three sons are college professors and one edits a metropolitan daily. Another near-by farm sent its only son into a factory; he is internationally famous and many times a millionaire. Other farmer boys I knew are dentists, druggists, merchants, clerks, drummers, or run filling stations. But not one of them is a farmer.

Have these jobs anything in common? Just one thing: they are all more or less swivel-chair jobs. Not one of them makes things with his hands or depends for his meal-ticket on his muscles; they toil not, neither do they spin, and would be insulted if called "day laborers" or "workmen." Most of them would object to the word "job." They are above jobs, as they are above work; theirs are "intellectual" pursuits; they are mostly "professionals" of one kind or another.

Why did they leave the farm? Why are most of the men I know in New York from farms, or from country villages of New England or the Middle West? Let the "darky" tell: "De groun' am hard, de weeds am tough, de sun am hot; guess dis darky called to preach!"

We were not all called to "preach," but we were certainly "called"; and of the preachers' sons I knew, not one was called to preach.

I heard a call in that direction once—I wanted to go to China, to travel and see the world in general. For three years I cherished the idea of being a missionary. I gave it up because I could not convince myself that the "call" I heard was not merely the "East a-calling me," and found another way to answer that call.

Right here we come to the gist of the matter. If I can find out when your natural curiosity got set in one direction or focused on one point, I can learn more as to your fitness for this or that kind of job, and especially as to your unfitness to fit into certain jobs, than I can from your family pedigree even though it goes back to Adam. Why? Because the man whose natural curiosity is not set in one mold or direction is potentially fit to explore any field of human activity that has ever been explored or dreamed of.

Put that down as law number one, if you please, of the laws by which you can answer your own question as to your fitness to do, be, or achieve this or that. If you are not curious about it, if its exploration would not excite you, if you would not like to grasp it with all the senses you were born with and with all the modern extensions science provides to only fairly acute human sense organs, you cannot say you are *fit.* Oh, possibly fit enough to make a fair job of it, but certainly not fit enough to warrant your calling it anything but a job.

Call that curiosity to explore or to know or to achieve some specific thing "vocational interest"—"bent" for short. And let us distinguish "jobs" from "vocations." The girl who has pounded a typewriter eight hours a day for ten years at twelve dollars a week, and still loves it and thinks stenography so grand a profession she would not trade it for any other on earth—and girls do get that way—has a "vocation"; but if she works at it only because she needs the money to buy clothes, it is a job, though she may have a vocation ahead of her. And so hereafter I shall speak of a "job" as unloved labor—a mere subterfuge for living, a mere meal-ticket to live by; "vocation" as a work of love, sufficient unto itself.

Can we say that a girl who has put in ten years at a typewriter without having advanced in position in any respect whatsoever, has a "vocation"? We can. Thousands of young and middle-aged clerks, messengers, stenographers, chauffeurs, waiters, chorus girls, nurses, school-teachers, elevator operators, street-cleaners, policemen, doormen, janitors, *et cetera,* pursue their vocations as zealously as do the great bankers, lawyers, doctors, actors, journalists, merchants, artists, and scientists, theirs. They have found their life work, they are enjoying their bent, they are content.

Back to the farm once more. When I was reading *Tom Brown at Oxford* and getting *bent* in one direction, one of my brothers was reading an old book on physics; he got bent on electricity. So bent that he made a Holtz machine. Made it all himself and all by himself. And it would spark! He had *made* electricity, made it with his own hands—from an old book. Nothing remarkable in that. The point is that he did all this when he was seven years old. Genius? No; but please note that your infant prodigies are usually so one-track-minded that when they leave home they either become geniuses or go crazy. Their bent gets fixed early—set, hardened, crystallized. Their curiosity-horizon becomes limited, narrowed down to one field. They cannot see beyond it, they don't want to see beyond it; there is no beyond.

That brother got bent on electricity. Does it pay, will it grind any grist, can he buy shoes with it? That is always a secondary matter with him. The fact that he is monkeying with some electric gadget with his own hands, making the wheels go round, making the wheels themselves, making them *spark*—that is enough for him; it is his bent.

Law number two: the earlier your bent was fixed the more certain you may be you cannot change it. Perhaps that is putting it too strong; perhaps I should say, the more difficult it will be to change it. To speak of a bent getting "set" or "crystallized" is to use a figure of speech, but behind the figure is a great truth. How otherwise can we account for the fact that hundreds of thousands of people go through life in humble positions, holding down routine jobs year after year, never making the slightest effort to climb to a higher rung in the ladder?

I said "fact." If you doubt it, look around. And I am not now referring to the derelicts one sees on the streets shoveling snow, or the sandwich men, or the gray-haired women scrubbing marble floors at midnight. I mean the army of gray-haired men in the uniforms of conductors—of street cars, elevators, railway and Pullman cars—and the almost equally large army of aging schoolmarms, clerks, stenographers, and machine operators.

Only today there came into my hands the *News* of one of our great public utility corporations. From the page headed "Pensioners" I pick samples of men retired: "conductor," after forty-one years' service; "machinist," forty years; "gang boss," forty-five years; "helper," forty-one years; "tool-grinder," forty-one years; "laborer," thirty-seven years; "elevator operator," forty years. Imagine grinding tools for forty-one years—not making tools or making things with tools or inventing new tools, but *grinding* tools, for forty-one years; or operating an elevator for forty years; or being retired with the rank of "helper" after forty-one years!

What happened? What makes a man remain a "helper" for forty-one years? Education? Yes and no. Using education in its literal meaning, "to lead out," yes. That man was never led out, never educated beyond the helper point of view, got set too early and could develop no further because set. That is what makes for morons—adults with the intelligence of the average child of twelve. The moron is curious about nothing beyond his bent. If operating an elevator looms up to a child as a grand vocation, as something so glorious that it is worth devoting one's life to, as a goal in life, why, then, to that child as youth or as grown-up, operating an elevator means the realization of an ambition, a goal achieved, success.

Youngsters do take such bents. And such bents color their dreams and often become the grand passion of their lives. Nothing else really counts because their interest is *fixed* on that one thing; their natural curiosity freezes up in every other direction. But they may explore their own limited field so thoroughly and with such keen insight as to become specialists of great importance.

Many youngsters, of course, end their school, or even their college, days without fixed interest, with no bent. They are fitted for no particular job; they have no vocation. They drift from one thing to another, follow the easy way, or the path which offers the most money for the least work. In fact, more money and less work, or more joy at less effort, is the only guide they have to judge jobs by.

Such "bent"-less adults make up a large proportion of our population. They are probably the least efficient and the least useful members of society. They are the jacks-of-all-trades, masters of none. They are for hire; they are soldiers of fortune, dilettantes, odd-job people, idly curious, spectators, collectors of junk and bric-à-brac, floaters, tourists, pleasure-seekers. Their motto is, "What next?" their criterion, "Is it interesting?" or "Will it pay?" Some become intellectual snobs and parlor philosophers. Now and then one becomes a great discoverer; his aimless curiosity led him to stumble upon some unexplored cavern of human wisdom.

The vast army of women who reach maturity without vocation or fixed bent to curiosity also belong to this group. They marry, if they can find no other job—leaving the future to chance. One in five draws a blank, and may or may not try again. Generally they do; they have no other place to go. They are fit for nothing in particular, have fixed on neither motherhood nor wifehood as a vocation.

Return to the opposite extremes, the early bents. Recall the large proportion of my boyhood friends who have become school-teachers. Probably most of them got the teacher fixation before they were twelve years old; some of them had it ever since they could remember. Why does teaching seem so grand to a boy or girl on an old-fashioned dirt farm? Grew up on a farm? Then you know. Escape from drudgery and endless chores. A vast leap upward in life from humility and repression, and even servility, to a position of respect, of authority, of fame, of honor, of store clothes, short hours and no "work."

Thousands of men and women teaching school today are no more fitted to *educate* children than they are to command battleships or govern the Philippine Islands. They teach because in childhood they saw teaching as a way to escape humility and as a means to express self.

The medical, dental, and to a lesser extent legal, professions are also cluttered up with thousands who, before they had explored any field of human possibilities, got set on a profession as a means of escape from obscurity.

Why "cluttered up"? And why so many moron teachers? Because, having thus early fixed a goal, they lose interest in all else but the gateway to the goal—a certificate or diploma. Normal schools, correspondence schools, and night schools help them out, furnish short-cuts to the goal. The medical profession has waged war unceasingly on medical schools which grind out diplomas to half-baked and less than half-qualified practitioners. The teaching profession is still in a chaotic condition as to what constitutes fitness in an educator.

Childish bents are usually formed before the age of eight. If they remain unchanged up to the age of sixteen, they are really fixed; nothing less than a complete reëducation will change them. But most children who continue in school beyond the lowest grades discover other possible vocations. The years twelve and thirteen, as David L. Mackaye has shown, are especially likely to end with some definite fixed bent; boys decide to become lawyers, doctors, civil or electrical engineers, mechanics, aviators, etc.; girls, to become stenographers, musicians, teachers, nurses, etc. But such decisions cannot result from any real exploration of the field involved or from an examination of the individual's fitness to enter it; they result, rather, from the child's having hit on a particular method of escape from something distasteful and as a means to something desired—travel, adventure, excitement, novelty. As, for example, when I would a missionary be, as the easiest way to get far from the farm.

A farmer's daughter of twelve chooses to be a musician. Why? Let her tell it: "While sitting at the piano looking over my music, I imagine I can see myself dressed in beautiful silks with beautiful pearls around my neck, standing on a beautifully decorated stage, singing to a great crowd of wealthy people who have come especially to hear me sing some of the most wonderful pieces in the world."

Has she any talent for music? Not that anyone can discover after two years' practice. Why, then, is music her bent? It isn't. Her bent is silks, pearls, self-exhibition to a lot of wealthy people; music is the open sesame. Most of the people on the stage have no vocation for drama or for acting: they want to be seen in silks and pearls by a lot of wealthy people. Their vocation is to appear under the spotlight where they can be seen.

Probably most, if not all, of these early decisions as to future careers are prompted by anxiety: the child is fearful of the future and chooses some calling which seems to hold promise of perpetual adjustment. In the old days there was room enough for every boy on the farm to adjust himself. The farm itself was a lure. With rapid and easy communication with the outside world it cannot compete with the lure of the professions, of the see-the-world navy, of the get-rich-quick through night and correspondence schools. Many a boy who has tinkered around the Ford tractor is easily lured to decide to become an engineer or a mechanic —in so many lessons, at so much per. Earn $10,000 a year! The boy who fools dad into sending him to college because he has "decided" to become a doctor or an engineer is quite as likely to be fooled himself: his goal is not medicine or engineering, but position, fame, distinction, escape, freedom. The boy, dad, profession, and society in general are the losers through too many half-hearted, half-witted doctors, lawyers, teachers, engineers, architects, etc.

Sixteen is often a critical age for both sexes. Without fixed interest as yet, and with curiosity still reasonably wide open, opportunity for further exploration is suddenly denied because a job must be found at once. Many a potential Darwin, Eliot, or Einstein is snatched from high school to become a bellhop, or whatever society has to offer a bright boy who has to earn fourteen dollars a week to help support a widowed mother and three small children. Likewise many a budding Mary Garden never flowers because her voice money goes into brother Johnny's frat pin and dress suit.

The economic need which drives promising boys to become bellhops also drives girls to stenography—not as a vocation, nor even to eke out the family exchequer, but to secure such paint and powder and other ammunition as she thinks she needs to qualify her for her vocation—a life of ease and indolent luxury. Her job is to find a man who will keep her in the position she is bent for. She has no bent for motherhood, no yearning to be some man's helpmate. Her true vocation is to be kept. She needs no education, only make-up. Money is needed for that. She seeks a job.

Thousands of jobs begin that way. No bent, no fixation, no vocation; a job, any old job that will bring home a piece of bacon and pay the rent.

I knew such a boy. He began as bellhop. Today he is on Wall Street, is the father of a family, owns his own house and car, and is a success. Half the men in New York City began that way, perhaps the large majority of them. They grew up to the age of sixteen wondering where they would go, not caring very much, only mildly curious, ready for anything, longing for nothing in particular, having no bent or vocation, not sold on anything, ready to sell themselves to the highest bidder, but keen to go. Meanwhile they *must* find a job.

They scan the personal want ads, consult agencies, importune their friends. By the end of the week they are on a job. They don't stay long; they find another they like better—a "better" job, more "pay." They are fitted to the age. "More pay" has become an enormous profession with millions of votaries. The next time I see my ex-bellhop friend he may have changed bosses—and even jobs—three or four times. He may even have jumped to China to sell munitions, or to India to sell dyestuffs, or to Australia to sell movies. "Why did you jump?" "More pay. The family needed the money."

I cannot argue with him about his fitness. "Fit—what do you mean fit? Don't I hold it down? Don't I get good pay?" He does; he may yet amass a fortune and endow a charity. His eagerness to "live better," as he puts it, has come to be his bent; his vocation is "success." He would probably turn bootlegger if he could see success on no other tree.

A friend who moved from Chicago to New York fifteen years ago has changed his meal-ticket thrice during that time. I do not speak of his "jobs," because he makes too much money. He would spurn a job. His *vocation* is the most expensive college education for all his children that money will buy, a high-powered motor-boat, fine town and country houses, clubs, better golf, two new cars a year, plenty of servants, and the best-dressed wife in his community. To indulge his vocation he must spend one hundred thousand dollars a year. How does he get it? Any way he can, preferably on the stock exchange.

Is *crime* a vocation, or a job? Why do men become criminals?

We may distinguish between three groups of criminals: emotional, juvenile or jobless, vocational or professional. The first group does not concern us, for emotional crimes are outside of jobs or vocations. Nor need the second class detain us, for youthful criminals follow their trade because bad training has left them without a socially useful means of gaining a livelihood: they take to thievery for economic reasons; they have no other resource. They follow crime because, having once broken faith with society, they feel themselves outcasts, and govern themselves accordingly. Adults may also turn to crime as a meal-ticket job when others fail or when they can find no other, or as an easy way to make more money. They are likely to follow crime as a job for the same reason the juvenile offender does.

Men or women with normal vocations rarely turn to crime. They would rather slave at their vocations than succeed at jobs, and starve at their vocations than commit a crime.

Our professional criminal usually chooses crime as his vocation a few years after the average boy normally chooses law, business, teaching, mechanics, engineering, or medicine —after the turn of adolescence and just before manhood. He is no moron, but usually a man of intelligence. His education need not have been academic. He suffers from no childish fixation on some particular calling as the only one which will lift him above his humble position. He is not humble. He has kept what is called an "open mind" and is still curious about the world. He proposes to explore his domain.

Why do they choose crime? For the same reason that boys one or two years younger choose politics, the ministry, the stage, or social service, as a mode of self-expression. Only through the notoriety and publicity that such footlight vocations offer so abundantly can they discover a road to their goal, the gratification of their vanity. Their self-esteem, their swollen vanity, their desires, run to publicity. They commit crime not primarily for gain, but for self-expression; crime is their vocation. When their exploits fill front pages, when they successfully evade the bloodhounds and sleuths of organized society, they experience their supremest satisfaction. In fact, their vanity is usually their undoing, and if caught and condemned to nameless obscurity, would consider their career a worse failure than if hanged to the tune of radio broadcasts and newspaper front pages.

I had hardly written the above when the evening paper furnished me with a striking illustration of the criminal's colossal vanity:

> Terror-stricken by the fury of the mob, Hickman, his face ashy white . . . hung his head. . . . Taken into the photographer's room . . . Recovered his nonchalance. . . . Smiled, bowed, and registered emotion like an actor. . . . Not once did he betray nervousness or appear agitated (though the mob had cried "Lynch him!" a few minutes before). From a demeanor of dejection and lethargy he braced up as various photographs were taken. It seemed to please his vanity . . . laughed outright . . . made some attempt to improve his appearance . . . smoothed back his hair.

Why kidnap a girl? "Just wanted the money to go through college." Few teachers could invent a more perfect bit of rationalization for their conduct than that. No college could socialize Hickman's curiosity; that could only be done in childhood. But what careers are open to our Hickmans had they learned the lesson every young chimpanzee must learn before it is three years old—that others have rights which must be respected, that altruistic behavior pays more dividends than selfishness! Their perseverance, curiosity, daring, and courage, minus their heedless egotism and colossal vanity which must be gratified at any cost, but with a year or more of development and some social intelligence, might lead them to world renown and fame as a Lincoln or a Ross, an Edison or an Abel. They called him "The Fox." What shall we call the society which rears a human hyena?

The great explorers of the unknown, the discoverers of the secrets of nature, the inventors of useful appliances, and the wise and humane administrators and executives of human affairs, have been men without fixed interests, men with open minds, men who could bring fresh and vivid curiosity to each problem as it arose, weigh each problem on its own merits, and decide each problem without personal bias, prejudice, desire, ambition, or gain. They could search for the truth, for what is just, for what is honorable, for what is humanly useful and desirable, because they did not know. They were curious, their vocation was to learn—the highest vocation within reach of human beings, the noblest when pursued in behalf of humanity. Such men are the intellectual giants of the earth, the master minds—in law, medicine, theology, education, politics, social service, and science.

Does your job fit you? If you have no bent, no vocation, no consuming interest in some special field, no burning desire to explore, endeavor, or achieve in some special direction, and have a job which satisfies you and keeps you out of the poorhouse, you may consider it a fit—though not necessarily a custom-made fit. There are many degrees of fitness. If your greatest fear in life is that you will lose your job, or that you will have to work for a living, and if your greatest ambition is to surpass the Joneses, or if you are content to keep up with the Joneses, any job will fit you that you can get and hold.

Your fitness for any job depends on several factors, which vary according to the nature of the job. One is fairly constant. Call it *technique.* And let us consider three distinct and specialized fields of activity to illustrate what I mean—bond salesman, chauffeur, stenographer.

I might have the enthusiasm of a cyclone, the daring of an earthquake, a vocabulary as big as the dictionary, the mechanical and inventive genius of Ford and Edison. Would these talents alone enable me to sell you a bond, drive your car, or take your letters? They might help, but if I try to sell you bonds I must know *bonds*—preferably more about bonds than you do; better still, more about bonds than any other bond salesman. Bonds represent a highly specialized field of human activity. Years must be devoted to that field before one can be said to *know* bonds.

Apply the same principle to the job (or vocation, because motor-driving can be a vocation) of driving a motor-car—or taking dictation and transcribing notes on a typewriter. The primary requisite of a chauffeur is ability to drive a car; of a stenographer, to "stenog." The stenographer feels "at home" with a notebook or in front of a typewriter; the chauffeur, in the driver's seat—or under a car. Neither feels at home in front of a *Bond Street Journal;* neither knows bonds, nor is supposed to know bonds. Nor is it essential for a good bond salesman to be able to spell, type his own letters, or drive his own car.

Technique. You know whether you know the inside of your own particular job, and how well you know it. You can, accordingly, decide whether or not you are fundamentally and primarily *fit* for it. If you do not know its technique you are not fit, however skillful you may be otherwise.

The secondary fitness factors vary according to the human equation. I might be too clever at cutting corners to fit your chauffeur requirements; you might want a very careful driver, not the cleverest or the fastest. I might be the world's champion stenographer, yet fail to meet your specifications; you might not want consummate stenographic technique, but merely a fair stenographer easy to look at and safe to dine with.

Every question of job fitness involves at least two, and generally several, human beings—each one unique and therefore more or less an unpredictable quantity. But certainly all jobs require something more than mere technique. Fitness for most jobs requires understanding of human nature and ability to get along with human beings. Yet more jobs are lost through lack of such understanding and ability than through lack of mere "technique." That fact may help you discover why you lost your job or cannot find a better one.

Don't be afraid to take stock of your fitness. Do you know the fundamentals, the *technique;* do you know human nature; do you get the most out of yourself; and can you get along with the people your job throws you with—employer, boss or manager, customers, patients, pupils, or patrons? To keep on the job one must keep off the nerves.

In short, you are fit for your job, if you know it, and if you can look it, talk it, and act it. And if you love it, are devoted to it, absorbed in it, and willing to sacrifice to it everything else save duty to family and friends, if it is food and drink to you, it is your vocation.

Can you turn a "job" into a "vocation"? Why not? You can if you have no childish fixation, if you are not set in your ways, if you have not drawn a circle around yourself outside which you dare not step, or built a wall around yourself beyond which you are not curious to venture.

Among the books before me is a *Handbook to the Incas of Peru* and several pamphlets on the decorative art of the Incas. They represent scientific investigation and form a real contribution to human knowledge; two of them are often quoted as authorities. The man who made that contribution used to keep a little fountain-pen shop in Boston. His shop was a job; it enabled him to keep himself and his wife till their children grew up. His vocation, the thing he loved to do, was to read, especially books of travel and exploration and descriptions of the manners and customs of primitive people.

At the age of fifty he gave up selling and mending pens for a humble position in a Harvard museum, where he remained for three years. Then he went to New York to be near his daughter, who had become a musician of note, and again turned to a museum where he could gratify his curiosity. Two years ago, at the age of eighty, he was retired, the occasion being marked by a dinner tendered by the staff and trustees of the greatest natural history museum in the world.

Most people are ready to give up a job when it is no longer necessary as a means of support, but the man with a vocation never retires. My old friend was "retired," but he didn't retire; he is as faithful as ever in his attendance at the museum, his interests are as keen as ever, he continues to be curious, to explore, and still makes the results of his investigations available for those who are curious about extinct civilizations and who can only know them through the printed page.

Such complete transitions from jobs to vocations are fairly common, but not as common as they would be if our educators paid less attention to intelligence tests and more to the stimulation of new interest in pupils, and if the rivalry of this commercial age were not such as to force countless young people into jobs before they can discover a vocation and fit themselves to follow it intelligently and wisely.

One more illustration. Professor "A" at the age of forty-five was famous in the academic world as a Greek scholar. His training had been entirely "classical" and quite unlike the method of scientific research; his interests had been almost exclusively "academic." By a fortuitous circumstance his curiosity was aroused in chemistry, one of the most difficult and complex of modern sciences. He began to explore that field, with the result that today he is well known throughout the chemical world. Probably not one chemist in ten in America has the faintest idea that Professor "A" was committed to the classical for so many years, or even knew Greek at all.

From selling and mending pens to unraveling the decorative arts of an extinct civilization; from studying and teaching a dead classic to mastery of a modern science: you, too, can turn from a dull routine meal-ticket job to an adventurous vocation which will nourish your soul, if you have the will and can use your brain.

Does your job fit you? How fit are you?

You are a Senator. How well you are fitted for the vocation of lawmaker is of vital interest to every citizen of this nation. You are a doctor. How well you know the human body in health and disease is to your patients a life-and-death matter. You are a teacher. Can you teach my child, lead him out, arouse him to new and more useful ambitions, encourage him to dare, to manipulate fearlessly and with due regard to the rights of others, and inspire him to investigate ceaselessly and honestly? Or you are an executive of a great state or corporation. Can you get along with people, do you understand human emotions, can you grasp social situations intelligently? If not, you are unfit for your job, and citizens of state or stockholders of corporation must pay the price of your unfitness.

I think again of the men I came in contact with today on whose fitness I must depend for my fitness as a mere human being who happens to be one of this vast, intricate, complex social organization. I cannot escape some sort of social organization, go where I will. We are all dependent for our daily bread, for the water we drink, and the air we breathe, and for our lives, liberty and happiness, on the efficient functioning of society. That it is sadly inefficient, the bread unwholesome, the water and air impure, liberty replaced by license, happiness dearly bought, and life itself insecure, is because society is bedeviled by thousands who are not fit for their jobs, and especially because thousands of public and semi-public servants are bent on jobs but are without bent for service.

Remedy? Beware of the job-seeker; seek the man whose bent is social service and who has intelligently fitted himself to serve.

We fire the man who sleeps at the switch and shoot the soldier who sleeps at his post. I can think of several jobs I should like to tackle if I didn't have to sleep so much. Can't you? Why do we sleep so much?

CHAPTER X

WHY DO YOU SLEEP SO MUCH?

When I am asleep I am dead to the world. And this world is the only world I ever expect to know and is right now more interesting than it ever has been before—and I know so little of it! There is so much I want to know, so much I want to do, so much I want to explore! Why, it seems to me that if I had hundreds of years more I could not satisfy my curiosity, and I know that with even thousands of years I could not exhaust the secrets that call for exploration.

I cannot hope to live many more years—perhaps ten or twenty, or possibly even thirty, but certainly not forty. And for each four years of my life I must lose one in sleep—lie dead to the world like a log, like an imbecile, like a bear in a winter cave, like a cabbage in a cellar.

And I have already lost fifteen years. What a tragedy! Fifteen years lost, strayed, or stolen—never to return! What could I not do with them! And what have I to show for them but a few bad nightmares and a lot of silly, senseless dreams? And I am to go on losing one year out of every four. I resent that. At best I have few enough years ahead of me; I should like to salvage that one year out of every four that I must lose. I cannot get back the fifteen years lost in snoring, dreaming, sleeping; but henceforth I should like to sleep less and live more. I want more time. Nothing is so precious as time, for without it nothing can be precious.

They tell us we shall be a long time dead—and I know of nothing to contradict it; but no one yet has told us how we can save the time lost in sleep and spend it for living here and now.

How do you feel about it? Would you like to get along without sleep? Would you like to salvage two, four, or six hours each day of the eight you now lose in sleep? Or are you like the farmer's hogs? "Pen them up," said a neighbor, "with the same amount of corn, and they'll fatten in half the time." "What's time to a hog?" replied the farmer. If that is your attitude you probably will be no more interested in rationing your sleep than you are in rationing your food. But if your curiosity is yet far from satisfied; if you can think of endless worlds you would like to explore and countless problems you would like to tackle; if you can recall few days in your life when you have gone to bed satisfied to leave off—then you are a real human being, fit to live like a human being, and worthy of your unique human heritage.

That does not mean that bed never looks good to us, or that we don't again and again bless the man who "invented" sleep, or that we don't often welcome the chance to tumble into bed and out of the world, or that the arms of Morpheus do not at times seem as inviting as a draft of cold spring water on a desert hike after a meal of canned corned beef and salt crackers. Of course we love our sleep. But do you love life more and would you sleep less? Would you ration your sleep if you could?

As a matter of fact, we do ration our sleep. Mine is the usual eight hours a day. I can work or play for fifty hours and then sleep for ten and feel fit again. But with less than fifty hours' sleep in seven days I slow down appreciably. Which means that if I try to save five hours from sleep in a week, I have five hours more time for work, but I can't use it effectively—thus there is no net gain in work done, and probably a loss.

I said "probably." I do not know. No one knows. In fact, few have paid very much attention to sleep. Your family physician probably doesn't know what sleep is. Ask him why you must have fifty or sixty hours' sleep a week, and he certainly will not know. Yet he cheerfully prescribes sleep as a "restorative," and can prescribe drugs for sleeplessness. Ask him to tell you how you are "restored" during sleep, and he will talk in generalities. Ask him if you can get along for a year with twenty hours' sleep a week, and he will say he does not know. Some family physicians, of course, don't know how to say "I do not know," but I assume that yours does, and says it whenever you probe his ignorance. At any rate, sleep cuts so heavily into our time, and in a way so shortens our lives, that it is worth looking at, even if the questions that stump family physicians cannot be answered. But sleep as a problem in human behavior is being studied right now in laboratories, by competent observers. We can get closer to answers and better answers than were hitherto possible, answers which will help us understand ourselves and to that extent help us get the most out of ourselves.

Sleep, like life, is a relative term. As we are more alive or alert at times than we are at others, so there are degrees or depths of sleep. But there is no known single criterion for sleep, either of dogs or of human beings. There can't be. Why this is so will be plainer when we look into sleep itself.

What is sleep? What do I do when "now I lay me down . . . ?" Obviously, I take the weight off my feet; that allows the muscles of my legs to relax. I also take the strain off the muscles of my back and shoulders; they, too, may now relax, as may also the muscles of my neck which hold my head in position when I sit or stand. In other words, when I lay me down I throw my entire system of motor or skeletal muscles out of gear, as it were; they are no longer called on for work. In my recumbent position it also follows that my motor muscles are no longer sending the same kind of messages to my central nervous system as they send when I sit, stand, or walk. That frees my central nervous system, for the time being, from eternally adjusting the hundreds of muscles and millions of muscle engines which must work ceaselessly when my motor mechanism is in action. And because my motor mechanism has gone out of action, my blood is not called upon to supply it with the fuel necessary to keep it in action; thus, more fuel now becomes available for the purely vegetative or visceral processes of my body.

But when I finish the above line of that childhood prayer and add "to sleep," what more do I do than allow my motor mechanism to relax and put it away for the day, as it were? I close my eyes, and thereby deprive myself of my most important means of getting information about the world in which I live. There is a further consequence, and a very important one in understanding sleep. When my eyes are closed, I suddenly stop that endless stream of stimuli which beat upon them and which lead to countless activities throughout my body.

This closing of my eyes is roughly analogous to what happens in a central telephone exchange when its busiest subscriber hangs up for the day—no more messages from that source.

To get the full significance of this, think over for a minute the number of things you have done in the last hour because of messages transmitted to your central nervous system through your eyes. Even though those messages led to no action in your arms or legs, they did lead to an unending stream of activity in your speech mechanism—you were thinking; and thinking is motor action. Unless you are intensively occupied with some specific problem, your thinking mechanism is engaged in ceaseless random activity, whether your eyes are stimulated merely by the light of the fire or the light from the moon and stars. Countless, endless stimuli bombard your Central as long as your eyes are open. To close them is to shut out the world of illuminated objects.

What else do you do when you lie down to sleep? What other lines of communication to your central nervous system, what other sources of stimuli which impel to action, do you cut off? Sounds? No; not since our ancestors passed the marsupial stage, millions of years ago, have we been able to fold our outer ear so as to exclude sound waves and thereby shut out sound stimuli, just as closing our eyes shuts out light waves. Sounds can still get at us when we try to sleep, and even after we are asleep. Any noise, especially if unusual or not monotonous, may assail our ears and keep us awake. But just the same we do what we can, when we try to go to sleep, to make our ears deaf to sounds. We do not turn our heads to try to determine their direction, as we do when awake. Sounds which might stimulate or rouse us to some sort of exploratory action, if we were on our feet, lead to no action when we are going to sleep, and are, as it were, unheard when we are asleep.

I am accustomed to going to sleep amid the noises of a great city. Rarely is there a period of two minutes in any one night when my ears are not assailed by the rumble of the Elevated, the honk of an automobile horn, the grinding of brakes, the blast of a whistle from a steamboat on the river or a locomotive engine in New Jersey, the clang of an ambulance, or the shrill siren of a fire engine. These stimuli assail my ears day and night. They don't impel me to action when awake because I am accustomed to them. They don't keep me awake when I want to sleep. They may clang and clatter all they please upon my ear-drum, it is as though the Central of my nervous system had got so accustomed to them that it ignores their existence. So accustomed am I to them that the very quietude of the deep country is a stimulus to keep me awake. So is it that the man from the quiet country usually has a bad first night in a noisy city.

Not only may the profound stillness of the country disturb me; the very softness of a feather bed may keep me awake far into the night. I am accustomed to a thus-and-so bed. When I stretch out on it my body comes in contact with it. Wherever my body touches that bed is a source of stimulus. In a new bed, especially in one harder or softer than the one to which I am accustomed, my central nervous system is assailed by unaccustomed stimuli. They are likely to keep me awake.

Does it begin to be clear, then, that the chief thing we do when we lay ourselves down to sleep is to try to shut off all the messages we can which usually assail our Central during our waking, active hours? Just as an operator in a telephone central might feel justified in closing up and going home when she knew there could be no more messages that night, so our Central goes out of action when no more messages requiring answers may be expected.

And that is sleep.

To be asleep is to be dead to the world of sensation: we neither see, hear, nor smell, nor do we sense touch, pain, pressure, temperature, or organic hungers. But this world of sensation is not so completely shut out as it is during deep anæsthesia.

Our Central is, let us say, the cortex of our brain. We sleep when that cortex stops sending messages to those parts of our body which act when ordered by the cortex. It is not so much that the cortex itself temporarily closes up while we are asleep as that it stops sending messages to arms, legs, voice mechanism, motor mechanisms in general. It stops sending messages because messages (stimuli) which, when we are awake, normally lead to action, stop going to Central. With eyes closed, no light messages go to the cortex; with ears laid on the shelf, as it were, sound waves cease to be stimuli; with the body stretched out on a bed to which it is accustomed, and guarded against heat or cold, the cortex is further relieved of analyzing still other groups of messages. Receiving no messages, it transmits no orders.

But even when we are asleep certain kinds of messages can and do get through to the cortex, and can and do lead to action; that is, we wake. Even with my eyes closed and the mechanism of eyeball adjusted so far as is humanly possible to the dark, a flash of light in the room may still penetrate my eyelids and be enough of a stimulus to rouse me. I am accustomed to the fire siren—usually several blocks away. But two or three of them together, with excited human voices in front of my window, will get through to my cortex and wake me. The wife of the physician may sleep through a dozen telephone calls; one wheezy cough from her baby will stand her on her feet.

Note that standing on her feet is a motor activity, performed in response to a stimulus. Note, too, that that same stimulus presumably did not get through to the doctor's cortex, just as stimuli of telephone calls do not get through to hers.

And having noted that the motor activity above was the result of stimuli—in each case received through a sense organ—we are prepared for a definition of sleep: suspension of all ordinary sensori-motor activities whereby during waking hours we sense our environment and keep in touch with it. And here we may recall again the assertion made above that there is no known single good criterion of sleep. Sensori-motor activities were suspended in both the doctor and his wife; they were asleep, possibly deeply asleep. But the doctor was not so deeply asleep that he could not hear the telephone, nor his wife so soundly asleep that she could not hear her baby. In other words, sleep is always a variable quantity or state; the criteria which are usually given for sleep only give a new name to the variable.

What, then, is the significance of the cessation of motor activities due to the fact that stimuli no longer excite the cortex? Simply that when I lay me down to sleep I temporarily cease to be alive, or alert, or aware, or conscious if you please, of the world at large. That world neither stimulates me, arouses me, nor interests me. I receive nothing from it through the eyes which impels me to action. My ear connection with it has been cut off, as it were. For while, as I pointed out, we long ago gave up the faculty of closing our ears, it is probable that the tension of our ear-drums and our auditory apparatus in general becomes relaxed during the general relaxation accompanying sleep. We are not so alive, as it were, to sounds that assail our ears.

But however deep or profound my sleep may be, and however dead to the world I may seem to be, I am not all asleep or dead; part of my body is still very much awake and alive. Activity has been suspended in only a part of my body. What part? The part I did not know how to use at birth, the part I had to learn to use, the motor part, the part I use in walking, talking, thinking, etc. That part of my body which from birth knew how to respond to vital stimuli continues its activity during sleep. Activity in the vital organs ceases only with death. No matter how profound the sleep, or how sleep is induced, the heart beats, the blood circulates, the lungs rise and fall, and the thirty-odd-feet-long alimentary canal keeps up its movements.

These vital processes—heart-beat, respiration, digestion, *et cetera*—carry on without the cortex of the brain. They function through lower brain centers. Hence we may say that during sleep there is cessation of those activities only which depend on the higher nerve centers—the cortex. This may seem like elementary physiology, but unless this distinction is kept in mind it is not possible to come to grips with sleep, or understand the various kinds of sleep.

Sleep, then, is a condition during which our motor mechanism is relaxed, and during which only some unusual or heightened stimulus can reach the cortex and lead to action in the motor-response mechanism; we are more or less dead to the world. Our highest brain center has lost its normal wakeful irritability.

Just exactly what takes place during sleep is not yet known, nor apparently was that problem ever seriously tackled until recently; and so little is yet definitely known that we must wait for an answer. Part of the difficulty of answering this question is obviously the same difficulty that confronts the physiologist when he tries to explore any one cell of the body; by the time he gets it in his test tube it is dead. But we shall return to this question.

Having been told that activity in the big muscles of your body stops during sleep, you might naturally infer that normal sleep is characterized by no more movement in arms, legs, and trunk than in a log at rest. You may even boast that you sleep "like a log." Investigations now being made by Dr. Johnson of the Mellon Institute of Industrial Research have demolished the idea of log-like sleep, and incidentally have given us a new idea of the depth of sleep.

Suppose you lie down on a bed and never move a muscle for ten hours, what happens? The muscles which support the weight of your body, even though relaxed, must get tired; the circulation through these muscles must be slowed down by the weight on them. Now a tired muscle is just as capable of sending in a message to your Central as is a bad odor or a strange noise. We grew up with the idea that we have five senses, and so we have—hearing, sight, touch, taste, smell; but we also have five other senses, hardly, if at all, less important—pain, pressure, movement, position, temperature. The big body muscles in contact with the bed may be fatigued by having to carry the weight of the body; they may also become overheated: they send fatigue and heat messages to the cortex.

Those messages may not wake us, but they are enough to move us. And that is exactly what Dr. Johnson found. As a result of some thirty thousand observations made on eighteen sleepers he found, contrary to common belief, that the average rest period does not exceed fourteen minutes. A typical subject changed his position in bed on an average of thirty-five times every eight hours, meanwhile slumbering peacefully on. The most restless subject moved or changed his position on an average of once in every seven and three-quarter minutes. The most log-like sleeper changed position on an average of every twenty-five minutes.

In other words, we may lie down to rest, but we can't rest all the body at the same time. Mere gravity will cause the blood to accumulate and become stagnant in one organ. The mere pressure of the mattress or of the covers must interfere with the blood supply to certain muscles and parts of the skin. Some muscles may be stretched, or tendons and joints strained, and certain skin areas heated to a point where the temperature receptors send in imperious messages for change.

To sleep like a log, then, is abnormal. Otherwise we should never dream. Presumably we never dream in our deepest sleep. I have read many theories about dreams, and even a few dream books, but I have never found a theory of dreams which fully satisfied me. I therefore offer the following for what it is worth.

Sleep itself, as we have seen, is a variable condition and not an absolute state, like death, for example. During sleep we retire from the world, but we have not entirely retired—we can be called back to wakefulness, to a state of alertness. That which calls us back, or the stimulus which arouses us, varies among us as individuals and in each individual according to the condition of the body prior to sleep.

In other words, the body "I lay me down" tonight is not at all necessarily the body which went to bed last night. I may be more subject to, more tuned in on, certain classes of stimuli tonight than I was last night; or, to use a common expression, I may have something on my mind tonight which I did not have last night; that "something" may pursue me far into the night, and make me twist and turn and fidget and squirm as though it were a bug. The contents of my stomach may be quite different from what they were last night. There may be something in the bed that was not there last night. The bed itself may be different. And so on without end. Any one of these incidental factors may modify my normal sleep procedure tonight, keeping me awake for hours. I may carry to bed an unsolved, and to me vitally important, problem. I may be very tired, but as thinking does not require much energy I may think that problem over with myself far into the night, even to the point of getting angry with myself because I am not getting the rest I need to cope with the tasks I know await me tomorrow. To get angry, of course, is to get more awake: the business of anger is to rouse to action. The angrier I get, the wider awake I become. At last my anger subsides, I lose interest in my problem, and I fall asleep.

Having fallen asleep, the cortex of my brain, the analyzer of sensation, retires, as it were, becomes inhibited, as the physiologists say. It turns hot during the night, the blankets weigh me down, pressure stimuli get a hearing in my central nervous system, messages are sent out, and I kick the blankets off. But I still swelter, let us say—sweat perhaps, for sweating also is a reflex action and not under control of any voluntary or learned act on my part. In other words, I can sweat without a cortex. But stimuli of general bodily discomfort keep pouring into my central nervous system. If they pour in hard enough they may wake me, and I may try to find a cooler room or an electric fan. Or they may lead to a minimal motor response: I may merely think (dream) I am looking for a fan. But as I am still asleep, and as my cortex, the organ of my critical faculties, is not on the job directing my thinking, I may dream that I am roasting in an oven or being boiled in oil.

Dreams, in other words, represent motor action, but in a low and uncritical form. Why this should be so will be apparent with a moment's reflection. A dream is prompted by some excitation of brain cells, from some organic stimulus. Such excitation during waking hours usually leads to appropriate action in motor mechanism: we do something with our hands or feet. Nerve paths from Central to the muscles which perform these acts get worn, as it were, from continuous use—"facilitated," as the neurologists say.

Hence in dreams we walk through doors, or on the water, or fly over trees, or fall from housetops, and perform all sorts of incredible feats and life-saving acts. Neural energy thus finds an outlet and we sleep on—or talk or laugh or even walk in our sleep; that is, the neural energy leads to overt action.

A dream, then, is a break, as it were, in sleep. Dreamless sleep is more perfect sleep than sleep marked by dreams. As neural excitation may be cumulative, we have our most vivid dreams just before we wake—hence they are easily recalled, and we marvel at their nonsense and smile at their absurdity. The actual walking, running, flying, falling, etc., that we seem to do while dreaming is simply our dramatization of such action.

To say, as does Freud, that all dreams are wish fulfillments and chiefly of a sexual nature, is in my opinion nonsense. Organic or visceral pressures or tensions of course enter into many of our dreams. In other words, the sensations or stimuli which start the dream process are as likely to originate in the viscera and through pain, pressure, movement, position, and temperature senses, as through our sense organs proper. Any internal stimulus, including hunger, thirst, and sex stimuli, may lead to dreams. In that sense, then, every dream may be said to have a meaning of its own. By "meaning" I refer, of course, to an impulse which leads to such action as can take place in the thinking mechanism freed from the normal critical analysis of the brain cortex.

The sleep-walker seems to transcend any theory of dreams or of sleep. He may perform movements which require very delicate adjustment of muscles which are normally relaxed in sleep. We can therefore say that the sleep-walker is not entirely asleep. Nerve centers which control action in the motor mechanism remain on the job.

I recall a somewhat parallel and instructive case told me by the great physiologist Carlson. While a student in California he changed his rooming house. A few days later he left his laboratory in a "deep brown study"; that is, a part of his cortex was busily engaged in solving a certain problem, and the remainder of it was asleep. He started off for his room, and not until he had reached the door did he realize that he had gone to his former place of residence. He could recall nothing that had happened between the time he left the laboratory and the end of his journey. One part of his brain had been so busy on a certain problem as to exclude the world at large. His eyes seeing, he saw not; his ears hearing, he heard not; but his legs carried him to his old haunt through sheer force of habit. He was like a man walking in his sleep. To be in a deep brown study, or a fit of abstraction or absent-mindedness, or a doze, or a hypnotic state, is to be only partially conscious, partially alert, and hence partially asleep. Sleep is a condition, an endless variable.

Why do we wake up? The obvious answer would seem to be, because we have had enough sleep. But how do we know we have had enough sleep? "We" during sleep have passed out, as it were. What is it, then, that wakes us? A stimulus or message so insistent that it gets through to the cortex, setting up an irritation which in turn transmits the message to our voluntary muscles; that is, the muscles we use in stretching, getting out of bed, etc. It may be a light so bright that it filters through our eyelids, or it may be a message from one of our visceral organs—hunger, thirst, or a distended bladder. Certainly the sleeper will wake even without external stimuli such as light or sound. The stimuli which our internal organs furnish us enter into our lives in more ways than we usually give them credit for or have words to name.

With the untrained infant a distended bladder is no stimulus to wakefulness; even a growling stomach may be taught in a reasonably short time to growl unnoticed until it stops of its own accord—to resume a few hours later more insistently than ever. That is, the infant soon learns to sleep six or eight hours at a stretch; it forms a habit of sleeping; the cortex learns, as it were, to remain quiescent for a certain length of time. The youngster's body gets set to a system of physiological rhythms.

I may wake in the middle of the night, let us say, and it may be six hours since I have eaten food, yet I don't feel hungry, though it is fairly certain that my stomach is empty and has performed its usual hunger contractions. Why don't I feel hungry? Simply because I have learned to disregard hunger contractions at that time. Different sections of my entire alimentary canal have learned certain habits. These habits have little to do with physiological needs; they are a part of the customs I acquired in infancy and childhood. My feeling of hunger after my normal period of sleep is really a conditioned reflex.

There is no longer any great mystery about conditioned reflexes, but there is much that is not yet known about the physiological rhythms of our body. In the absence of any known stimulus we may say that the sleeper wakes through habit. The average person wakes up as definitely after eight hours' sleep as though he were an alarm clock set to go off at the end of eight hours. So the physician who hears the telephone has set himself to hear just that, the mother to hear her child. I have had a few occasions to use an alarm clock, but I can't recall more than once when I did not anticipate its release by two or three minutes. This can happen because our body itself is always marking time, through heart-beat, respiration, *et cetera.* We come to have a time sense; it may be so strongly developed that by giving it attentive thought we can set our body to go off after a certain lapse of time.

Suppose I decided to get along without sleep altogether, how long could I live? I cannot answer this question, nor, so far as I know, has the experiment ever been made as to how long anyone could live without sleep. In all the experiments, so far as I know, the individual fell asleep in spite of everything the experimenter could do to keep him awake. As to what would have happened had the experimenter been endowed with the powers of a Spanish Inquisitor I have no definite idea. Certainly people do go to sleep on their feet, and even in great pain. Presumably, one could no more continue to do without sleep than one could continue to get along without food.

Experiments made on nursing puppies throw light on this problem. Although they were carefully nurtured, all were dead within a week from enforced insomnia; one was kept alive for 143 hours. As a matter of fact, prolonged complete sleeplessness is rarely met with. It is generally believed that ten days of absolute insomnia is enough to cause death. Even the insomnia which accompanies certain nervous disorders is generally broken by short periods of sleep, and it is certain that even partial insomnia is often followed by abnormal or deranged behavior.

The "third degree" insomnia sometimes practiced in police stations proceeds on the theory that if the suspect is kept awake long enough, his manufactured story will break down earlier than his habits of behaving consistently and he will finally tell the "truth." But after two or three days' enforced insomnia the suspect may find the discomfort so insufferable that he will testify to anything in the hope of being let alone. One of Dr. Johnson's subjects in the Mellon Institute, after a period of experimental insomnia, declared that he dreaded future experiments more than any other form of physical pain.

To find out just what happens with the loss of a reasonable amount of sleep, Dr. Kleitman of the University of Chicago kept some subjects awake up to 115 hours. But they could only be kept awake by being engaged in some sort of activity which kept them on their feet. The minute they sat down they became very drowsy, and on lying down fell asleep immediately. That is, the muscular relaxation which followed their lying down precipitated sleep. From which Kleitman inferred that the onset of sleep is due to complete muscular relaxation, either voluntary or involuntary. But this, it must be understood, is quite in keeping with the idea that though we often go to bed and deliberately relax our muscles we may still be kept awake by thinking. We can go to bed with thoughts, or thoughts may come to us after we get in bed, as heavily loaded as earache and as irritating. Thinking itself is incompatible with complete muscular relaxation.

As sleep is a variable, so also is muscular relaxation. Ever pick up a child in deep sleep? Such complete muscular relaxation that its body seems as though it would fall apart or break in two if not handled carefully. The average child goes to sleep more easily than the average adult because it carries to bed fewer unsolved problems. It can sleep; it does not have to think.

The Marathon dancers throw light on our problems—at any rate I have carefully watched them for light, and think I found some. They certainly bear testimony to the marvelous capacity of the youthful human body to readjust itself to new and unnatural conditions. Of the thirteen couples I saw today, all but one seemed more refreshed than yesterday. After dancing (mostly a purely perfunctory performance) 200 hours, an additional twenty-four seemed to have added nothing to their distress: they are getting the habit of sleeping fifteen minutes out of each hour. Those I talked with tell me they go to sleep in a second—just as soon as they tumble on their cots. Only one of the dancers wore signs of distress on his face; most of them looked as bright and cheery as you please. Some of them undoubtedly can supplement the fifteen-minute rest or sleep pauses by "naps" while on the dancing floor.

Muscles, after prolonged action, get tired; the fuel in the muscle engines becomes depleted, and fatigue products (lactic acid) accumulate. But the recuperative power of muscles is now known to be not only great, but a much quicker process than was formerly believed possible. Otherwise Nurmi could not break two world's records in one day, nor could the Marathon dancers continue for twelve days with a rest of only four hours a day—and that in fifteen-minute doses. That fifteen minutes is a life-saver! They drop out primarily because of bad arches or blistered feet, and secondarily because their repertoire of social manners cracks under the strain; in a word, they quarrel or fight.

Why can't they dance a thousand hours? I do not know. I suspect it is because their cortex, after prolonged continuous bombardment by similar and hence monotonous stimuli, enters a state of inhibition: it can no longer analyze stimuli; the dancers become "goofy" and are withdrawn.

In other words, the unsolved problem behind sleep lies in the fact that just what takes place in the nerve cells, their processes and their functions, during work and rest, is not known. Something takes place, that is certain—just what, will some day be known, for some of the keenest intellects in the world are engaged on that problem. When it is solved we shall know whether the eight hours we sleep is a habit or a part of our nature which cannot be violated with impunity. Bad physical condition forces many dancing couples to quit, but the real and final factor which leaves only one couple on the floor is a well-disciplined brain cortex.

While it is true that we do not know just what happens to us during sleep, it must now be obvious that without sleep we die. That is, sleep is as necessary for life as food and drink. But I must infer that we can ration our sleep. Probably most of us could sleep less and work more. Mankind on the average seems to sleep eight hours a day. We could probably get along with six hours or even less. It is often alleged that one famous American (though whether he himself ever alleged it I do not know) habitually gets along with four hours' sleep. Possibly Mr. Edison does, but I do not believe it, nor have I ever found a physiologist who does. And yet I have found no physiologist willing to assert that one could not learn to get along with four hours' sleep.

And so we come back to our starting point: can we ration our sleep? And our answer must be, we don't know for certain; probably we could. Possibly the mother is yet unborn who is willing, deliberately, to experiment on her child, not to see how long she could keep it awake as the experimenters did with the puppies, but to see if she could train it to get along with four or five or even six hours' sleep a day. The average mother, on the other hand, is strongly imbued with the idea that the more a child sleeps the better it is for the child—or if not for the child, for her own peace of mind. The child that can sleep ten or twelve hours a day is nothing less than a gem. By and by the physiological rhythms I have spoken of become fixed; the child acquires the habit of going to sleep at a certain time in the evening or night, and the habit of waking up at a certain time in the morning.

That was a useful habit in the early days of the human race when there was no such thing as artificial light, and when even the light of the moon could be counted on for only a few nights in the month. For millions of years man and his ancestors have been diurnal animals, functioning primarily through their eyes. Their bodily activities were mainly determined by what their eyes saw; without light, they were literally and figuratively in the dark as to the source of supplies needed to keep body alive. The human eye is ill adapted for the dark. Sleep was not only a natural response to the absence of light, but it gave the body an opportunity to restore itself. Little enough, I repeat, is known as to just what takes place in that restorative process, in the brain cells, nerves, and synapses of our nervous system, and in our muscles, or how fatigue products are dissipated; but we do know that we generally go to bed tired and normally wake up refreshed. Sleep is the great restorer.

To be restored is to be renovated, refreshed, revivified; able to face the world again with courage and a fresh supply of vital energy. Sleep is an absolute necessity, a vital process if you please, for such complexly organized, highly strung animals as we are. We no more have to learn sleep than we have to learn digestion, for it is a reflex act and follows prolonged bodily activity naturally, as night follows the day. Sleep is also a habit—an individual habit, personal for you and for me. We need sleep, we must have sleep or we die. The question at the head of this chapter is therefore personal, and to be answered by each of us according to our needs. Our needs vary, as do the hairs on our heads and the clothes on our backs. The real question, then, is: "Do I get enough sleep to keep me as alert, vigorous and keen-eyed as I should be to get as much out of life as I can; and if not, why not?"

In the report cabled back from Paris after Lindbergh landed was the statement that he ate practically nothing during his flight because he could keep awake better hungry. Translate that idea into your own personal problem. Life for every adult is a personal problem—more than likely, these days, to be fairly difficult, and certainly complex. Give yourself a chance. Pay at least as much heed to the upkeep and repair of your body as you do to your motor-car—and know it as well! No car can repair itself over-night; the body you lay down to sleep can restore you for another day's work, if your day's work is done and laid aside with your work clothes.

As hunger is the best sauce, so the fatigue that follows action is nature's best opiate. The common complaint, "I can't work because I can't sleep," should usually read, "I can't sleep because I don't work." But the difference between work and worry is the difference between an ox chewing its cud and man, the domesticated animal, trying to eat his pie and keep it. You can't work best when you are drowsy; you can't sleep best when you are worried.

I used to worry because I couldn't go to sleep as soon as I hit the hay. I know now that the loss of sleep was not half so bad for me as the worry. What was I worrying about? "I ought to be asleep." Just some words. These words were riding me, bossing me. Why and how do words boss us? What are words, anyway?

CHAPTER XI

WHY DO WORDS BOSS YOU?

You know anywhere from five to ten or possibly thirty thousand words. Each day you use two or three thousand, the number being determined by how much you talk or write or think, and especially by what you talk about. For some subjects you presumably have a larger vocabulary than for others, and for many subjects probably no vocabulary at all—a book or conversation on such a subject would be "Greek" to you.

Words are tools—the tools you use to work your fellow men. The more words you know, the greater your command over your social environment. Many doors open more readily to words than to jimmies; for it is quite true, as we used to tell our children, that hearts, like doors, open with ease to little keys called "thank you" and "if you please."

All this probably seems obvious to you. What may not be so obvious is that you are the victim of words even more than you are of hunger, storms, or poisoned arrows. You live in a physical world, but you also live in a word-world. You are bossed by words. And unless you have thought about it especially, you will not easily realize the enormous part words play in your life. Indeed, I know of nothing that can more clarify thinking or better help us understand ourselves, our nature, our powers, and our limits, than the realization that we live in a word-world and must eternally adjust ourselves to it.

The physical world is none too easy to live in; it can trip us up in a thousand different ways. But this word-world . . . ! I can lose a race against heat or be overwhelmed by a flood, and that is bitter enough; but the bitterness of defeat by the elements is as nothing to the agony of being called an outcast, or of having my immortal soul consigned to hell for all eternity.

Have you ever thought of words that way or tried to realize what they can do to you? Do you know that without words or speech there would be no human culture or civilization, and that what we call civilization is largely a matter of words? Possibly most of civilization's ills, foibles, and diseases have come about because talk is so cheap that the poorest of us can fool ourselves into believing that we are enormously healthy, wealthy, and wise—even when our outlook is a barred window and our costliest garment a strait-jacket.

We eternally and ceaselessly talk to ourselves, and call it thinking. But where does the thinking get us if the words we use mean only what we want them to mean? Yet that is what we all do. That is what our ancestors have been doing since Adam—handing on from one generation to another a mass of words or vocabulary so heavily loaded with ghosts, devils, vanities, and asininities, that we spend the most valuable years of our lives learning them and the remainder of our years staggering under them or struggling to get free of them.

Here is a boy of sixteen, for example. But before we look at the boy let me make my position plain. I am about to mention certain concrete cases where words were learned as potentially deadly as charges of dynamite. I am to discuss the effect of such words on human beings. Only that. I am not discussing the ethical, moral, or any other phase of sex, social, or religious life. In short, I am not here maintaining that the boy (or girl, or you or I) should or should not do this or that. I am not talking as a moralist, but as a biologist and psychologist. I am only attempting to emphasize the great fact that words can carry loads and thereby ride us—even to destruction or to death.

The boy, for example, is told what he should not do. Specifically he is warned of the dangers of intimacy with members of the opposite sex. "Don't do this," "Don't do that," "Let them alone till you are old enough." But the boy *is* old enough. How does he know? Nature tells him, and in a language older than vocal cords. His own changed vocal cords tell him. The boy *knows* he is old enough in more cells of his body than there are words in the world.

"Wait," says society. "Do it now," says nature. Which wins? "Nature, of course," you say; "society can't prevail over nature." Don't be so foolish. Nature is not only weak, but human nature is easily scared; and society (fathers, mothers, medicine-men, priests, chiefs, kings, power by any name) can scare the wits out of a boy or girl. And does, and has been doing it for unnumbered thousands of years.

You and I know men literally afraid of women, so scared of them they could no more make love to a woman than they could fly to the moon. What becomes of them? They become unnatural; and unnatural they remain, because society, having said "Don't" in enough ways and loudly enough to make them afraid of women, seems to care nothing further about them, except possibly some years later, when, having acquired riches or fame, it says, "You ought to get married now." To such a man society might with equal reason say, "You ought to swim the Pacific Ocean now"; or to a chicken which has been plucked, "Now fly."

That fear is as incompatible with love as ice is with a red-hot stove is one of several facts often overlooked in understanding ourselves and our fellow beings.

But the boy, let us say, driven by "don'ts," finds a way out—and is found out. Whereupon another flood of words is loosed upon him. Among these the word "insane" occurs repeatedly, and always uttered in a scary voice. The word "insane" is loaded. The boy has already learned to think of insanity in terms of horror and fatality. And broods and vows, and falls and vows, and falls again, always brooding. Insanity hangs over his head. Nature driving him ever onward, the boy fighting and brooding, till overmuch brooding drives him insane.

I know personally two boys who were scared into insane asylums. Neither could reconcile his natural urge with parental "don'ts," and the result of the struggle was abnormal behavior—insanity. The ultimate fate of one I do not know; the other, after having frightfully mutilated his body, committed suicide.

Or the boy, let us say, in spite of don'ts, "fell," "degraded" himself to the level of a woman of the ancient profession, and was told that he had a "loathsome" disease. Who sympathizes with him now? The mere mention of the dreadful word almost drives him crazy, and has driven many to suicide.

I know from experience how heavily loaded that word can be. An army officer returned from abroad with an infected upper jaw and sinus. Instead of operating at once the dental surgeon tried "letting nature take its course," and finally suggested that the officer must have a Wassermann test. He was a married man, had lived a clean life abroad, and insisted that it was quite impossible he could have contracted a venereal disease. But the surgeon insisted that the test be made. Not till three days later (one day should have sufficed) was the wretched man put out of his misery by the report that the test was "negative." His suffering had been as real and possibly more horrifying than if he had been confined in a dungeon with snakes and rats as his only companions.

Without going further in this direction it will be enough to point out that almost the entire natural process of love's coming of age, seeking a mate, and procreating, is cluttered up in a mass of viciously loaded verbiage preposterous enough to drive Cupid himself insane and weighty enough to break his back.

I go back to childhood days and recall with amazement the number of "loaded" words I was taught. Some were so sacred I was not even to say them to myself, some were sinful, and some merely naughty. No matter how great might be my urge to explore them or attempt to find out what was behind them, I must let them alone. Such exploration, in the words of one of my youthful school-teachers, "would lead a young man down to hell."

The misery, wretchedness, and unhappiness let loose among ignorant human beings by that word "hell" alone is incalculable. And "ghosts," "spooks," and "haunted" follow close behind "hell" and "death" as words potent to terrorize and make cowards of us. That such words still belong to the religion of human beings is incredible. That sheer fear of ghosts or hells or devils ever made a human being more efficient as a human being, or more useful to any society, I greatly doubt; that the fear inspired by such words has made men driveling idiots and arrant cowards there can be no doubt.

I seem willy-nilly to keep getting back to the part played by fear in our lives. I can't help it and stick to my text—

how we are bossed by words. It is "wrong," or a "crime," or a "sin," or "wicked"—such are the wordy injunctions handed on from one generation to another. There may be valid grounds for these injunctions, but the more important question is: are they compatible with human impulses, with human curiosity and desire to explore? If not, they are uttered in vain, and tend to drive human behavior into dark and damp cellars.

Consider some of the words you picked up as a boy which became tools with which you clubbed your playmates or which were hurled at you as daggers or poisoned arrows; such as: stingy, coward, 'fraidy cat, stinker, piker, tattletale, cheat, sissy, liar, thief. Did I not have to conform to "decency," the list of poison words could easily be extended.

Similar words are employed by girls in their behavior toward each other or used by their elders as weapons to control their behavior.

As childhood passes adolescence and manhood approaches, a new set of words comes up over the horizon as weapons to control behavior: "career," "success," "progress," "country," "loyalty," "virtue," "chastity," "style," "fashion," and so on.

What an enormous part that little word "style" plays in our lives, and will go on playing, so far as I can see, till the end of time. It is astounding how the entire human race succumbs to fashion—regardless of cost in time, money, or physical pain. There are parts of the world where no boy can be a "man" till he has submitted to a surgical operation which would seem incredibly barbarous to a baboon and stupid to a cockroach. Knowing something of the nerves involved, I cannot even think of the operation without a shudder. Yet the native Australian youth submits to subincision without a murmur—otherwise he can't be a "regular fellow" and a "he-man."

Girls in parts of Africa submit to an operation quite comparable in its incredible stupidity and ghastly agony—only thus can they become "ladies" and "marriageable."

How in the name of human flesh and nerves boys and girls became "he-men" and "marriageable" women before idiots invented the idea that a senseless surgical operation with a piece of broken beer bottle was essential to masculinity or femininity, is a problem which apparently never bothers the heads of the adult formers of fashion.

The poor misshapen foot of the Chinese girl and the patience she will need to hobble through life on utterly fantastic things that bear about as much resemblance to a human foot as a horse's hoof! Yet that absurd deformity makes her a "lady," and Chinese "he-men" are probably no keener to marry a mere woman than we are. In similar vein, our grandmothers deformed their waists at the expense of their vital organs in order to be "ladies" and thereby "rise superior" to ordinary human beings; and our mothers took to bustles, rats, and switches, to "improve" on nature and keep in "style."

Go on and fill up the picture yourself. History reeks with strange, fantastic, bizarre, freakish, monstrous, incongruous deformities forced upon lithe Apollos and lovely Aphrodites to "fit" them for manhood and womanhood, to make them lords and ladies. We may stint our stomach and starve our brain and still preserve our self-respect, but few of us are brave enough to defy fashion's decree. "*They're* not wearing them any more" is enough to make us take them off; "this is what *they're* wearing now" is enough to make us follow suit.

If an omnipotent idiot were the arbiter of human values

—happiness, comfort, joy, virility, love, sanity—he could not make half the monkey out of human beings "they" have done and are doing right now. I venture the assertion that in all the world of shoe leather (snake, lizard, shark, alligator, ostrich) there is not one pair of shoes extant made on the anatomical last of the human foot. I had to go to Lisbon, Portugal, before I could find a shoemaker who would take me seriously the first time I told him to make me a pair of shoes to *fit my feet.*

How many women do you and I know who, when it comes to selecting a hat, gown, corset, or shoe, would choose one labeled "comfort" or "usefulness" rather than one labeled "elegance?" Mind you, I am not implying that women are more idiotic than men in such matters; I think they have gone far ahead of us in many respects. I use women for illustration only because it seems natural for a mere man to be more critical of the female than of the male. I am not implying that there is an innate sex difference in vanity or common sense. Certain it is that women have no natural corner in vanity, nor men in common sense. Nature is not so foolish.

The psychology behind "style." "fashion," "they," holds in general for "success," "progress," "loyalty," "culture," "refinement," "society," "getting ahead," "playing the game," *et cetera.* These and similar words and phrases in varying forms fell upon my youthful ears as thick and fast as raindrops, but no one took the trouble to define "success," "progress," "culture," or "society," or told me where I would be when I "got ahead," or whose game I was to play if I "played the game." Rating success by the current coin of the dollar, I must be a colossal failure in the eyes of my millionaire friends—and some of them are not too careful to conceal the fact. That one word "success" alone hurled at youth from every angle, and even shouted at him from the covers of magazines, is enough to account for many of the idiocies of modern life.

Get more, do more, do it now, succeed—we are buried alive under slogans, bossed by more devils than are known to a Buddhist Hades, driven more ways than poor animal nature can respond to and remain human or animal.

Not only must we achieve "success," but we are gravely informed by parents and school-teachers that in the bright lexicon of youth there is no such word as "fail." And many a boy, having had that injunction instilled deeply enough into him, then and there begins to fail in ways heretofore unknown to history. The psychology behind that phrase is all wrong. Failure is sometimes inevitable in this universe in which we live. Some of the loftiest mountain peaks have failed, oceans have dried up, stars have lost their vitality and gone out in darkness, great branches of the tree of life once dominant have crashed down in utter failure.

"Success" and "failure" as they are handed to youth can only be made a goal or something to be avoided as youth is taught sane and useful habits of living. Bodily behavior, in short, must be fashioned along lines of habits which are attainable by human nature. To set up verbalized standards incompatible with human capacity or at variance with human needs, is to make for personality conflicts and social disorders. I was *told* to hitch my wagon to a star; but my father took considerable pains to *teach* me how and where to hitch my horses and how to drive a wagon load of hay.

By the way, you are forty-two, aren't you? What a pity! Old enough to be chloroformed and put out of your misery. Didn't Osler say that anybody over forty was "old"? But Osler was about sixty when he said it, and therefore the silly remark was prompted by the same spirit which impelled the fox which had lost its tail in a trap to decree that thereafter all fox tails should be bobbed. Instead of inquiring into Osler's age, everybody began to worry about his arteries and wonder how "hard" they had to be before arteriosclerosis would kill him off. Worrying and wondering, they forgot that Sarah Bernhardt and Joseph Jefferson acted at seventy-five; that Titian painted at ninety-eight; that Galileo, Spencer, Lamarck, Browning, Goethe, and Verdi turned out their masterpieces after they were seventy. Edison is only eighty.

As we come up through life we hear more or less about "old age," its terrors and its imbecilities; but the doctrine that forty marks the beginning of old age . . . ! What a searching there has been in the last few years on the part of thousands of men and women into their physical condition! Searching? Rather, vague fears, doubts, questionings, as to arteries, heart, lungs, liver, gonads, etc. Fear of old age, fear of heart failure, cancer, tuberculosis, loss of vitality, *et cetera*, has done as much to age people and bring on premature senility as Father Time himself.

I recall when a boy my father saying in solemn tones, "Son, your father's getting to be an old man."

"How old are you, father?"

"Fifty. Today is my birthday."

That was a very solemn occasion—it meant that "death" was not very far off. And what a heavy burden of grief, sorrow, and anxiety—to say nothing of the more stupendous load with reference to its mystery and the immediate or ultimate fate of the "soul" at the Judgment Seat—that word "death" carried!

As a matter of fact, my father lived forty-three years after that fiftieth birthday, happier than he had ever been, in many ways more useful to himself, and certainly more youthful in the eyes of his family. Possibly his sons, born to him comparatively late in life, had something to do with helping him preserve his youth, but if he had been of a morbid disposition the mere idea of having passed fifty and being thereby and inevitably *old*, might have forced him to worry so much that he would have had neither time nor inclination to enjoy life.

Much of the worry people suffer in carrying the freighted burden of certain words is due partly to sheer ignorance and partly to lack of resource in building new adjustments to meet new conditions. If, for example, I am told that I have cancer of the stomach, I may be thrown into such a panic that it will require extraordinary skill on the part of the medical profession to save my life. What do I know about "cancer"? Nothing. I only know cancer as a word which stands for some unseen, insidious foe, and which spells inevitable death. True, no one yet knows a great deal about cancer, but enough is known to bring it within reach of remedial measures. A little knowledge of that sort on my part might help me through.

Or take the case of our friend Mrs. B., who was recently ordered to a sanitarium for tuberculosis. She has no real picture of "tuberculosis": to her it means prolonged helplessness and more or less hopelessness. To this add the wrench of leaving three children, and the result is an extraordinary strain on her nerves. She can't adjust herself to the new way of living into which she has been ordered, but wastes her precious energy worrying about an uncertain and unknown "future."

"Poverty," in the little community in which I grew up, carried a whole sheaf of poisoned arrows. The "poorhouse" was the symbol of complete and abject failure; to die in the poorhouse was even more disgraceful than to die in an insane asylum. Hence the ceaseless injunction to "save," "watch the pennies," "take no chance," "avoid risk," "deny," was laid on human lives intended by nature for the utmost freedom known to the cosmic universe.

Next to warding off or defeating death, the idea that sexual vigor or "virility" should be maintained regardless of cost seems to have been an obsession with the human race ever since man learned to talk. "Virility" is expressed in as many different ways as there are different languages. The boy begins to get the idea early in life, in dozens of different ways. He can't be a "real man" unless he eats thus and so; he can't be a "strong man" unless he does thus and so. Much is made of "manhood," but always there is the implication that there can be no true manhood without virility. Probably no group of people in the world today is without a virility cult in some form or other—from the worship of the phallic emblem in the Far East to the gland operations of the Near East and the "sex pills" that are to be found in every drug store from Harlem to Hollywood.

The list of loaded words we learn, whose burdens we bear and which boss us, is a long one, and I make no pretense to having exhausted it. Each one of us, in fact, has his own particular repertoire. The extent to which you or I may be "disgraced" or "mortified" or "chagrined" differs, of course, according as our characters, habits of life, and views on life, vary; and varies likewise with each of us according to circumstance. This must be so obvious that it need not be emphasized. But there is a list of very little words which we must now look at—mighty they are, and quite out of proportion to their size.

I, my, me, mine.

We, our, us, ours.

We were taught that it is polite to say "you and I," but grammar knows better and human nature knows better: "I" is the first person, and for me personally the exact center of the known universe. We tell the child not to be selfish; but from birth and in a thousand ways we encourage the "I" to find expression, to give expression, to exhibit itself. And "I" does. The biggest chapter in psychology is behind these little words. We can go further and say that in a way the psychology behind them is responsible for practically all human conflicts, all human strife, all human wars. *My* country right or wrong, *my* family, *my* children, *my* religion, *my* God (is, as I should like to be, an avenger and will torment if, *et cetera)*, *my* party, *my* town, *my* college, *my* fraternity, *my* lodge; *I* says, sez *I; we* are the people.

There is biology behind this psychology. We are not by nature gregarious animals; we *are* by nature family animals. Nature provided us with ways of distinguishing friends from foes. To hate our enemies and love our friends comes to us naturally—and too easily. But the point I would emphasize is that as we are brought up these pronouns become so heavily loaded with the primitive animal emotions of hate, fear, and love, that we are swayed by animal passions, and hence fail to exercise the critical judgment or intelligent choice which is our human prerogative.

As long as I feel that I am inevitably or irrevocably "committed" to *my* this or *my* that, I thereby and to that extent surrender my right of choice and lose the freedom of judgment which is my most priceless privilege.

Many a human being comes to the so-called "age of discretion" without a shred of discretionary capacity left in his or her make-up. Everything associated with the first person singular or plural (personal or possessive) is "good" because the personal pronoun accompanying it makes it so. But every country, religion, or even race, language, or culture, with the third-person handle, or to a less extent with the second-person handle, is, just because of the handle, "inferior." So it is that we come unquestioningly to have preformed judgments for every human being and every human act in the world. "Superior" races, "inferior" races; "high" languages, "low" languages; "civilization," "barbarism"; "cultured" peoples, "savage" peoples. The number of antitheses that could be named is almost unlimited. Your vocabulary probably contains many stronger than any I have used.

Think of the implications attached to such words as "Nigger," "Dago," "Wop," "Chink," and so forth. These words, as you and I learned them, covered a multitude of sins—of omission and commission. How has the young black boy learned them? How does he face life, having learned the load that the word "Nigger" carries for his white self-styled "superiors"? The shackles on the leg of his paternal great-grandfather could not have been more real in limiting his freedom than the handicap thus placed upon him as he gradually learns to know all that the word "Nigger" implies.

That the "inferiors" do not stay put—and that despite the artificial handicaps thrown about them in acquiring English "as she is spoke"—should help to drive home the lesson that a thing is not necessarily so simply because there is a word for it. Words, after all, are but man-made tools, which often persist long after they are worn out; and, like other human institutions, are often put to oppressive and inhuman uses.

Well then, what are words, anyhow, and why do you use them? Why are you a talking animal, and what is the rôle of speech? These are big questions to which space here permits only brief and dogmatic answers, but even so I shall hope to clear up a few of the common misconceptions about our major activity and our most human trait.

Words are tools, but they differ in one fundamental respect from hatchets and hammers. For example, when our ape grandfather cracked a cocoanut with a stone, the stone was a tool: with it he got a new and better control over his physical environment. And when he hurled a cry of rage at some one who threatened to steal his cocoanut, the cry also was a tool: it gave him some measure of control over his social environment. But when he told that "some one" that he would crack his head with the stone if he did not let his cocoanuts alone, he had an even more powerful tool for social control.

That is the way words came to be evolved. Finely shaded emotional cries (expressive of rage, fear, love, pain, hunger, thirst, *et cetera*) developed into words which accomplished the same social ends, but more exactly, and were therefore less likely to be misunderstood. Speech, therefore, is a tool or instrument for accomplishing some end, but the end is primarily social—just as it was originally in its animal form.

Our civilization is based on the coördinated activity of groups of human beings. Speech makes such activity possible. The hermit has no need for speech, nor even for vocal cords; he lacks objects (human beings) on which to use speech. Speech is as useless to him as a cradle or a love philter. Without speech human culture would disappear, and human society would split up into little groups with less cohesion than a flock of crows and no more cohesion than a band of monkeys—and with just as much "morality," "religion," "art," "science," and "government."

The animal cry is a response to a situation, and to that extent *objectifies* the environment; speech *analyzes* the situation. Thus through speech I can make a distinctive response to any single feature of any situation for which I have a name or which I can describe in words. Specifically, I can declare, command, or question. And all speech falls into one or other of these three fundamental forms. To discover how true this is, analyze the next conversation you sit in—or even a casual interchange of speech. "I'll tell the world." "Do it now." "Why didn't you?" Even when I exclaim I merely declare assent or dissent, or otherwise express some personal point of view.

One more important point must be noted: I can "create" universes, heavens, hells, deities, devils, anything, with words. It is not necessary that I should have learned these heavens, deities, *et cetera,* with my natural tools (sense organs) for learning the objective world; it is not necessary that I should have *seen* a heaven with streets of gold, or that I should have *smelled* the odor of hell's brimstone. Without using any senses at all, I can create a word-world which need have no more objective existence than the broomstick-mounted witches who used to sail off to the moon, or the Santa Claus who used to defy gravity and time and climb down chimneys. And what I can do with words you can do, even as our ancestors did for thousands of years.

With words I can play a marvelous game of golf, break the bank at Monte Carlo, corner the world's supply of grain, wage a war to end wars and save the world for democracy. Or, to put it another way, as an honest, industrious animal, I can manipulate only such parts of this universe as I get my paws on and my teeth into; but as a talking animal following my major activity, I am not limited by time or things tangible, or bounded by space or things concrete. I can create anything, talk about anything, do anything—in words; remold my world to my heart's desire; and consign you and yours to a hell so hot that the very words sear your flesh and make you writhe in a paroxysm of agony.

Now, the mere creation of heavens and hells is not a major human activity; talking about such things is. Just how much man would sweat to achieve "success" if he could not talk about it, or how much he would strive for "victory" if he could not boast about it, I have no idea. But there can be no doubt that for the last half-million years conversation has been the favorite indoor sport of the human race—nothing else is so cheap, so soul-satisfying, or can give mediocrity such a huge sense of self-importance. Speech was a *sine qua non* for civilization, but I must infer that civilization persists in spite of it. When civilization is based primarily on conversation, which in turn becomes an "art" and goes on on its own, for art's sake, it has run to words and may become as sterile as a vestal virgin.

Talk can be as cheap as air; it can also be as fetid, as aimless, as lifeless. The noise you make when you boast of progress may not sound like the croak of a frog, but it is made with the same kind of vocal organs. A pond of croaking frogs on a dark night makes more progress than an average smoking car or Palm Beach conversation; and, biologically speaking, has more survival value.

What words do you use? The words you learned, of course. You were not born a talker, or a linguist, or with a "talent" for English, Chinese, or Bantu. All the talent you had at birth was for making sounds. And you kept on making them. At last you made a sound which got you service—a pin removed, a meal, what not, something you wanted. You thereby "learned" that sound or word. You could not have learned to talk unless you had used words to get you service—a form of control over your social environment whereby your bodily needs were adjusted to your physical environment.

Physical environment? Food, shelter, pins, cold, heat, *et cetera*. Bodily needs? Your animal requirements: food, water, comfort, mate, *et cetera;* your "ego," "I," or personality.

Not knowing you personally, I can know nothing of your personality; but unless you are of parthenogenetic origin, your personality was formed primarily in answer to your visceral drives, and answered by personalities similarly moved by the emotions of hunger, pain, fear, and rage. Attitudes, if you please; or slants. You got slanted because you were trained by a slanted society. You learned your ways, bodily and verbal, in a society familiar with "good" and "evil" intentions, favors and disfavors; which could hinder as well as help, bestow rewards as well as inflict punishments; which, in short, was expert in the use of words as tools for social control. You learned these words, learned to "shower" praise, to "hurl" invective, to "curse," to "bless." You learned that if you gave a dog a bad name you could thereby damn it forever, transform it as by an evil eye, curse it as by the frown of a malignant god; you learned that you could control your fellow men, or at least your children, by the same set of tools.

You boss with words; you are bossed by every word you use blindly, heedlessly, ignorantly. To be "against" all flappers, lounge-lizards, morons, dagos, actors, evolutionists, bootleggers—all anybody or anything; and "for" all he-men, live-wires, efficiency bugs, boosters, Nordics, fundamentalists, one-hundred-per-centers—all anybody or anything: is to surrender to your cut-and-dried cast-iron moron word-world your inherent right to use your senses.

That word-world may or may not exist, but if your world is predetermined by catch-phrases and stock epithets you are indeed bossed by words and your judgment need be no more intelligent than that of a mob at a lynching bee nor more high-minded than that of an alley cat presiding at a dog fight. If, on the contrary, your world is the world you know with your senses; if you sometimes mistrust the label on the bottle and analyze its contents; if you look behind the party's platform to its deeds when in power; if you make certain that you and your country are right before you damn the "foreigners"; if you question your hates and prejudices and can smile at your foibles and fears; if, in a word, you value your most priceless social tools, you will not hurl them about like a child, but will use them as you use money—the right word for the end sought, and never a loaded word unless you know who loaded it and why. If, in short, you put more intelligence into your words, you will lessen their power to boss you and increase your power to control yourself and your fellow men. Beware, especially, of any word, phrase, or slogan which blows up whole groups of human beings. Every human being, including you and me, has a right to be judged as an individual—and, as I read my Bible, will eventually be so judged.

What do you read? And why, and what for?

CHAPTER XII

WHAT DO YOU READ?

In the beginning was the Word. You are a talking animal, the only animal that can duplicate its outside world and its inside experiences with words. Those words you can carry about with you, and with them reconstruct the past and predict the future. You can carry the universe under your hat, and in an armchair or in bed remold it to your heart's desire.

When man invented symbols for words, he made writing possible. Writing made learning easy and paved the way for a world-wide civilization. Any normal child can learn to read any written language in a few years. Any man who cannot read is illiterate—does not know his letters (the symbols of which words are composed); he is "uncultured." The man of culture is the man of books: he reads. What? What do you read?

Do you eat sawdust, iron filings, soap, lime, match heads, magnesia, potassium? They contain the raw materials of your body. You *could* eat them; but you could not live and grow on them. To live and grow you must eat such foods as contain the material you need, and in such form as you can use—building blocks to build and repair your ever-growing body, physiological fuel to supply the energy required to keep it alive. A sound body and a lively living require intelligent eating. "Elementary," you say? So it is. Then why read the equivalent of sawdust, iron filings, and lime? Can you use them in your business of living—or in the process of becoming cultured?

I do not like the word "culture" any more than you do; nor am I unaware that the foundations of civilization were laid before letters were invented; nor that the man of culture may be the vilest member of society yet unhung; nor that the lowest savage has a culture with a pedigree as long and as honorable as ours. But using "culture" as the polish, skill, or technique which distinguishes a Charles William Eliot from a ditch-digger, or a chemist from a bootlegger, or a surgeon from a butcher, or a statesman from a politician, or an encyclopedia from a cross-word puzzle, or an architect from a hod-carrier, the word has value which can be readily grasped.

Hod-carrier, butcher, and ditch-digger are valued members of society, and the bootlegger may be in society, but this artificial and scientific age demands skill and technique or it collapses and buries us in chaos. Because of its artificiality and complexity, it more and more demands intelligence and less and less brute strength. The world's burdens today are carried by giant cranes rather than on the backs of men. Even the food supply will soon depend more on the chemical laboratory than on the ploughman's legs.

This must be fairly obvious; I say it because I want a background against which I can bring into relief just what it means to be able to read, how what one reads influences one's life, why it pays to be as particular about what one reads as about what one eats, and why one should read with one's eyes open.

No, I am not going to tell you what you should read—I am not so presumptuous as to try that. But I do hope I can so present the fundamental facts about reading that you can diagnose your own case, and then possibly make a more intelligent choice of reading than you have made before. At the same time I hope I can clear up some serious misconceptions about "well-trained minds" and "higher culture." And the first thing we want to know is: what do we read *with*—mind or what? And what is the difference between *reading* and *thinking?*

I have, let us say, three sons—Tom, Dick, and Harry—born about four years apart, and bring them up on an Ohio farm. Now consider that these three boys are infinitely complex mechanisms and so conditioned or trained that one stimulus drives each to exhibit a quite different line of behavior. Thus: I come in from the field and report to the boys that I can't make our Ford tractor run and can't find out what is the matter. How do they respond to this news? Tom shakes his head and starts off toward the field; Dick begins a long-winded speech, telling me forty things that could put a Ford tractor out of kilter; Harry looks "thoughtful" for a moment, then disappears.

The word "tractor" stimulated each boy to action. They all knew something about tractors. The fact that ours was now broken was an additional stimulus to set them off and cause each one to exhibit the particular kind of behavior he had learned to exhibit when stimulus of broken tractor struck his eye or ear. Let us see what each boy did.

Tom, who had shaken his head and gone off to the field, had within an hour taken the tractor apart, located the trouble, repaired it, put it together again, and had it as good as ever. He had learned to do things with his body; his legs had carried him to the field; his hands had learned to deal with machines—he had what Watson calls a highly organized *manual* repertoire. He was clever with his hands. Words touched him off to action in his motor mechanism. Asked what was the matter with the car, he possibly could not have told me, or could not have described it intelligently enough for me to locate the difficulty if it occurred again. He knew cars through his eyes. His fingers were so trained that they could carry out messages received from eyes and carried to fingers, arms, *et cetera* (motor mechanism) *via* his brain.

Just as Tom's manual behavior for "tractor" stimulus bordered on perfect, so Dick's *verbalized* response to the same stimulus was well nigh perfect. He could describe every part of it accurately, knew its good and weak points; he could talk about it for hours on end. He could not take the car apart, or if he did, could not get it together again; but he could *talk* about every part, he could describe them. He knew tractors in terms of words. The stimulus of "tractor" (through eye or ear) set him talking.

Now Dick's verbalized behavior represents action—action as definite and specific as Tom's in using his motor mechanism. But the talker used only the speech segment of his motor mechanism—vocal cords, breathing apparatus, muscles of throat, of tongue, of jaws. The muscles in control of this part of the body are not unlike the muscles we use in walking; they are "striped" muscles, and perform only when impulses are transmitted to them from appropriate centers in the brain. They thereby differ from the muscles of the viscera or vital organs, which function primarily without orders from the brain but under local stimuli. They can and do, of course, transmit messages to the brain. For example, a pain in the stomach might have stopped Tom's working at the tractor and Dick's talking about it.

Harry went to his room and fell into a deep study. He assumed the attitude of a "thoughtful" man: legs crossed, chin in hand, eyes closed, brow furrowed. One might have thought he was asleep, except that a sleeping person cannot maintain a "thoughtful" attitude.

Wherein did Harry's behavior differ from Dick's? In quality of mind? Let us see. Does thinking require a "mind" any more than talking or using hands?

These three boys did not grow up in the same environment. They could not. The little farm-world into which Dick came differed in several important respects from that into which Tom was born. Four years can make a huge difference in a family. This point should be obvious to anyone, and yet it is constantly neglected by those who are trying to account for the different tastes, occupations, and so on, of children in the same family. Why, for example, one becomes a great reader and thinker, and another a helper in a repair shop.

The first son came to the farm when everything had to be done—stumps cleared, swamps drained, fences built. There was little time to talk about things, not enough time to do the things that had to be done. The order of the day was: "Do it," "Fix it," "Mend it"; and every deed that boy did with his hands, useful chores, met with the approval of the parents. That son soon found that *talking* about things did not buy him anything; *doing* things did. Besides, there was no one to talk to except father and mother, and they were busy with their hands.

With one second's start a fair runner can beat the world in the hundred-yard dash. Dick was four years behind Tom in learning to do things with his hands, but he soon learned to beat him as a talker. By the time Dick could talk at all, Tom was an established family institution; definite "chores" had become part of his routine: no talk required—action only in legs and arms. Dick was so far behind Tom in manual skill that he could not compete and was less valuable to the farm as a going concern. But he could ask questions, and kept on asking them. It was about the only way he could discover to get anybody to notice him.

Note here that all three boys came into this world with an innate impulse to explore the world. Call it curiosity—or, better still, impulses, which, carried to the brain through eyes, ears, nose, tongue, lips, fingers, and body in general, are transmitted *via* the brain to the striped muscles which carry us about by moving bony levers; with which we talk; and which, as the child grows up, become organized as hand behavior or as word behavior.

The extent to which the child will explore depends on opportunity and on checks. There is much to explore on a farm, many checks to such explorations. The farm, the organization of our little family, was such as to turn Dick into a talker rather than a hewer of wood. Parents would naturally encourage Dick to talk to compensate for the tongue-tied Tom. Such encouragement at this particular time might easily become the determining factor in Dick's life.

By the time Harry comes along the earth has made additional revolutions; it is not what it used to be. More especially, that little family is not what it was. The farm itself is not what it was. It is no longer a liability, but an asset; everything is shipshape; it pays its own way. I wish to emphasize the point that Harry was born into a different world, possibly a very different world, from that into which his brothers were born. This different world will inevitably cast him in a mold different from that in which Tom and Dick were cast. We are now to see how he becomes first a "thinker" and then a man of great culture, a reader.

Harry's usefulness as an all-round handy man has been anticipated by Tom, by a hired man, and by more machinery. He learns to talk, just as every child in a normal household is encouraged to learn to talk. Every early successful effort elicits a parental smile, a caress, or a more tangible reward; and considering the complexity of the voice mechanism and the vast number of nerve cells involved in talking, every normal boy and girl becomes a proficient talker in an incredibly short time. But, as often happens, just as Harry began to get confidence in his ability to talk and to emulate the talker Dick, and was possibly on the way to become a Demosthenes or a Daniel Webster, he was cut short with, "For Heaven's sake, keep still!" Two talkers around the house were too much for a hard-working father and an over-worked mother. Further efforts to shine as a talker were promptly nipped in the bud by, "Stop talking!"

That is a good deal to ask of a child. Does the child stop? Not at all. It learns a new way of talking—silent talking; develops a new audience—self. In a nutshell, it learns to *think*. When we think, we talk to ourselves.

Many persons never learn to become *perfect* thinkers; even those well trained as thinkers are likely, under emotional stress, to move their lips. Probably all of us have seen grown-ups, when adding up a column of figures, break into speech because they could not add the column up silently—that is, by talking to themselves. Confusion, or some external factor, became enough of a stimulus to force a new habit to give way to an older one. The habit of talking is acquired *before* the habit of thinking.

Thinking, then, is action in a definite mechanism and under definite nervous control no less than is talking, but the action in voice mechanism during thinking is usually so subdued or restrained that it can't be seen, nor is the thinking person himself aware of any movement in the throat. This lack of obvious movement in the voice mechanism during the thinking process prevents many from agreeing that the real and only difference between talking and thinking is in degree or amount of action: talking is *overt;* thinking is *implicit.* They prefer to think they have a "mind." They cannot agree what mind is, but "mind" does the thinking!

Most of us learn to supplement our talking-thinking mechanism action with action in hands and body—gestures, shrugs of the shoulders, grimaces, pursing of the lips, lifting of the eyebrows, *et cetera.* Many a man can't think without a pipe in his mouth or a pencil in his hand. Deaf and dumb people learn to talk—and think—with their fingers and hands. It is significant that Laura Bridgeman, the famous deaf and dumb girl, used her hands and fingers in dreams.

Harry is now, let us say, a thinker: he can talk to himself without making a sound or disturbing anybody. He becomes proficient in this performance, as proficient as Tom is with his hands and Dick with his voice. Will he become a *great* "thinker"? Much misconception prevails here.

Most of us are never driven to learn to talk to ourselves. We grew up proficient talkers and get a double thrill from talking: by hearing our voice, and by drawing forth the voice of our fellow men. Thus we become what is termed good conversationalists or rapid and fluent speakers. In almost every large family there is a spokesman, the best talker in the family. Possibly the worst form of punishment that could be inflicted upon an inveterate talker is solitary confinement. He can get no thrill from talking to himself—thinking—and in solitude cannot exhibit his skill to his fellow men. And that also is the reason why most proficient talkers cannot easily endure being left alone. It is not that they hate themselves or cannot get along with themselves; they just have not learned to talk to themselves.

Yet of all the work man does, nothing is so easy as thinking; that is, if we have learned the short-cuts which make visible action in voice mechanism unnecessary. But because the inveterate talker does not think, and because he regards thinking as linked up with a mysterious "mind," he has a rather profound regard for the man who can keep his tongue to himself. Time and again I have seen a man or woman in a noisy party get credit for great wisdom and profound thinking by merely keeping quiet during the confused conversation. And all the time the alleged thinker may have been mortified because he could not talk and sat in gloomy silence. Equally probable is it that during his silence no thought worth expressing passed through his brain.

The fact that a man is not saying something does not prove that he has anything to say, even to himself. We can know *great* thoughts only when they issue in such form that they can be sensed: as great poem, great tunnel, great bit of statesmanship, great scientific discovery, great plan of organization, and so forth.

We do talk and think to socially or biologically useful ends when we translate the results of our talking and thinking into such general bodily activity as is good for the living being. Dick's talk about motors would in itself never build or repair a motor-car. Harry might think about motors for an eternity, and still not know a radiator from a headlight—people do think that way; or he might save himself the trouble of thinking and do it by proxy—through others' thinking as recorded on the printed page.

Thousands of people devour hundreds of books, and through others' recorded deeds compensate for their own stupidity, cowardice, and indolence. A "great" reader is no more necessarily a great man than a "great" thinker: both may be utterly incompetent in the simple affairs of life and as socially useless as a real book-worm. He becomes a "reader," but it does not necessarily follow that he reads to any useful purpose. He may merely read as an easy and safe way to do rash deeds, commit crimes, achieve fame and glory on the battlefield or enduring renown as a benefactor of mankind.

Let us see what happens here. Reading becomes a substitute for thinking, which in turn is a substitute for more overt action in voice mechanism (*i.e.*, talking out loud). Talking moves the world. The world we live in is primarily a *talking* world; our word responses to the world in general, and to life in particular, come to play an extraordinarily prominent part in our total actions and reactions—and necessarily so, or civilization would not endure at all.

Harry, let us say, has acquired a vocabulary of a few hundred words. He can use these in talking or in thinking. How can he extend his vocabulary? Obviously, in two ways: learn more words by hearing them and repeating them; or learn words from the printed page after having learned to read. The written or printed word—in letter, newspaper, book, magazine, what not—is comparable in a way to a phonographic record of some one else's thoughts, expressed not as voice, but as letters or conventional signs which must be learned before they can be read.

Thus a vast library, such as the Congressional, or the Public Library of New York or Boston, is a collection of literally almost all thought which the thinking world has deemed worthy of record. Through these books we can learn how humanity at large has manipulated its world, and all of the world mankind has expressed in words. Even a well-selected five-foot book-shelf will enable anyone who has the will to read, the desire to know, and a fair vocabulary, to tune in on the thoughts of the ancients, and the most important records of human history and of all that man has learned about the universe.

Therein lies the significance of ability to read. Our life is all too short to meet the thousands of people we should like to meet and talk with, and whose experience we should like to learn. Nor without the printed page could we come in contact with the best and wisest thoughts of the generations that have gone before.

But there is so much to read, and, if one's curiosity has not been dulled and one's time not completely absorbed by the routine of life, so much that one *wants* to read, that many frankly give up because they don't know where to begin. They feel the urge to read, but they dissipate the urge because they can't control it, can't make a beginning, and so fritter away the few available minutes or hours a day in mere time-killing, energy-dissipating, desultory reading, which leaves them as flat as before and empty of experience which they can build into their own lives and against which they can draw in time of need or when more time and opportunity for reading come to them.

One or two personal experiences may not be out of place since they illustrate how books read in childhood may shape one's life. And please note that it is not only *what* is read that counts, but the circumstances under which a book is read. For example, no novelist has ever so thrilled me as did Dickens; not, I think, because Dickens was the first novelist I met, but because the first books I ever *owned* were a set of Dickens purchased with earnings in the hay field at the age of twelve. Mere ownership of the books gave me joy; they were *my* books. I devoured them with the greed of a hungry hunter who has captured his first game. All controversy as to whether Dickens was the greatest novelist that ever lived, or whether he was a great novelist at all, leaves me cold; the fact is that Dickens came to me on a sentimental platter; his characters are emotionally tied into me.

Another personal incident. The following winter saw a more important influence enter my life—a Christmas present of Darwin's *Voyage of the 'Beagle.'* Now I might have read that narrative without being so fascinated or so deeply moved by it: it was the circumstance under which I read it that tied it into the very fiber of my nerves. For, as I see it now, there was no particular reason why the *Beagle* voyage should have specially appealed to me at that time. I was already enamoured of books of Western life, especially Indians. *Belden, the White Chief*, was my Bible just then; and Catlin's pictures of the Indians were the illustrations.

The *Beagle* book came at the psychological moment. An attack of diphtheria had left me so paralyzed that I could not leave the house. I had had a surfeit of Indians. The *Beagle* not only took me out of doors, but carried me farther afield than I had ever dreamed of. That book proved a definite and enduring stimulus for years, and certainly had more to do with my course later in life than any other book I ever read.

The obverse side of the shield is to force the youngster to read a book as a duty or to win a coveted prize. I suspect that thousands of boys and girls get set against certain books, especially against the Bible, because they are forced to read them when their interest impels them in other directions. The Bible becomes a task, a drudgery, a duty. I was bribed with a five-dollar gold piece (a dazzling sum) to read the Bible through. What I did with that gold piece stuck longer in my memory than anything I got out of the Bible at that time.

I recall other books read in college days, especially portions of the great Latin and Greek classics. They were poked at us at the wrong time—chores to be done before we could quit school. And because of the eternal drudgery of looking out for grammatical niceties insisted upon by a professor who was more concerned with grammar than he was with literature, I found myself at the end of the so-called classical course with as much love for the classics as I had for pitching hay or cutting bands on a threshing machine.

Another personal experience bears out the point that few of us can get so busy, even as boys, that we can't find time to read. The fact is that both as youngsters and as adults we are likely to find what we are looking for.

I acquired, while still in a prep school, a five-volume set of Macaulay's *History of England*. I said "acquired"; the fact is I traded a pair of cuff buttons for it. In the long summer vacation, between spells of harvesting and picking stones from the fields, I found time to read those five volumes, often by stealing away to the haymow. It was a stunt, of course. Many books much more interesting were available at the time, but the manner in which the books were acquired, the fact that they were bound in leather which felt good to the hand, and the sonorous ring of Macaulay's words, caught me and held me to the end. But I certainly should never have persevered had I not already learned to chafe until I had finished any job I had begun.

Reading, then, is an activity which is acquired or learned like any other activity such as walking or talking, and in early childhood can become a habit like chewing gum. We can get so accustomed to reading that we feel no day is complete unless we have read something; and it should by now be obvious that we can read for our need's sake as truly as we can eat for our need's sake, the real difference lying in the fact that we *must* eat, whereas we can get along without reading.

How well we can get along without reading depends on our job, business, occupation, or aim in life. Many tasks can be performed, have been and are being performed, by men who can neither read nor write. They are illiterate. They get along without letters as they do without other devices invented by man to save time and trouble.

It may not profit me as an ordinary farmer to know who invented the plough or when, or the history of the threshing machine, but as a scientific farmer it may be important for me to know the latest findings of the Department of Agriculture, or what kind of wheat will thrive best in the kind of soil I own, or how I can get more milk from my cows or induce my chickens to lay more eggs. That information, easily acquired through the reports of the Department, represents not only the accumulated wisdom of the ages, but actual experimental observations. I might experiment and observe, and so preserve my status as a scientific farmer; but I could hardly compete with my neighbor who can dispense with experiments because he can read the results of others' experiments. It is in this respect especially that reading may be thought of as a time-saving device. A student in a professional school commands the results of thousands of years of observation bearing on his particular profession. Otherwise he could not, in four years, become as wise as Solomon or as learned as Aristotle.

Does reading "train our mind"? In a figurative sense, yes; but we should understand what is back of this figure. I have, let us say, a certain vocabulary which may be roughly divided into two groups of words. One of the groups I use in ordinary daily intercourse with my fellow men; the other relates particularly to my profession, business, job. I can speak the words, write them, think them; make something of them that you can understand, just as a builder with bricks can erect an edifice which becomes valuable for human occupancy. Assume that the first group of words is adequate for all practical purposes; I so command them that I can make my wants known to my fellow men and understand their wants—in short, communicate with them. That vocabulary need not be large; in fact, many men get along well with two or three thousand words and can even shine with less; there is no particular reason why they should strive to enlarge that vocabulary. It is not how large a vocabulary one commands, but how well one can use it.

But the merchant's, banker's, manufacturer's, professional man's, or scientist's vocabulary is never complete. Conditions change with new inventions, new ideas, new methods. Thus words lose their meaning, or even disappear altogether, or take on new meanings. The vocabulary itself must be constantly enlarged to cope with the wider knowledge and the new problems. Obviously, the printed page affords a ready opportunity to enlarge one's vocabulary—that is, to increase the supply of raw materials with which one may be called upon at any time to build.

In that sense, then, one may read with a purpose in order to help train one's mind—that is, to make oneself more efficient in general or in some particular field.

I spoke of the great libraries—of one, two, three, or even four million volumes, and from ten to fifteen thousand new volumes every year, in English alone! Suppose one could read even one in every thousand of these volumes, would that "educate" one; or, can education be had through a five-foot shelf of books, say of fifty volumes? Does the word "education" thus used mean anything? What, in fact, is the value of the so-called "higher" education? We are on sacred ground here and must tread softly, but let us see.

You and I come into this world curious, and equipped with tools or organs—eyes, ears, and nose—to gratify this curiosity. Before we are very old our curiosity becomes limited, gets set in certain directions. It may become practically confined to a meal-ticket, with a horizon no bigger than that of a seal or a dog; or it may grow with the years, the horizon ever broadening and widening. The really "broad-minded" man—that is, the man whose horizon has not been circumscribed by fear—sets no limit to his curiosity; it is limited only by force of circumstance and time. Education, as the term is generally used, can at best do no more than gratify curiosity, stimulate it, broaden it, or direct it in socially useful channels, and give it such familiarity with tools that it can use them as keys to unlock closed gates. The most important and valuable single tool invented by man is the printed page.

Using education in this sense, you should yourself be the best judge of what you ought to read. This does not mean that you should despise expert advice as to which of the hundreds of books available are best fitted to meet your requirements.

Of course you can extend your education—that is, if you want to know, if you are still curious. You can explore the heavens, the tropics, the arctics, the Congo, the thoughts of primitive man, the workings of your body, the forces of nature, and so on and so on, through the printed page, and at an insignificant outlay of money or expenditure of time and labor. But if your horizon is restricted to your job and the job itself is your horizon, your curiosity is pretty likely to be satisfied; it will not make much difference what you read or whether you read at all.

Fortunately, curiosity is not easily satisfied. Even a complete college course leaves most boys and girls with a longing to know more of something, curious about some aspect of the universe. If you have a spark of such curiosity left, you will be surprised how easily you can fan it into a great flame which will warm you through and through, and not only give you a new hold on life, but enable you to meet life as you never met it before; and having met it, to talk to it, ask questions of it, explore it.

You *can* get an education from reading. Of a kind. After all, what does the student in four years of college do but read books—or listen to some one talk like a book? Too often, like a dull and badly written book. The main thing, as I see it, is to choose your reading with as much care as you would your oil and gas. If you don't care whether your car gets you anywhere, ditch water will fill the tank as full as gasoline. If you want to be amused, want to get out of a rut, or want to go to sleep, read an amusing book, or one with a "kick," or a lullaby, in it.

You go into a vast department store: do you buy at random, or what you need and can use and can afford? You try to know what you are buying, and think you know why you are buying it. Use the same common sense with your investment of time in your reading—always remembering that in books, as in most other things in life, the best is always the cheapest. And the mere fact that it is a *book* is no proof that it is worth reading or was worth printing. Publishers are hopeful people and must publish.

A novel, for example, may be so written that it reveals a vivid chapter of history or illumines an important phase of some great social problem, and psychologically be as sane as a text-book on astronomy. Or, it may be as nourishing as dishwater, and as psychologically sound as the gurglings of an idiot. In other words, a novel may be good history and as scientifically sound as Newton's laws of gravity, and first-rate romance besides; or it may be less than nothing.

What do you want? Beefsteak or chewing-gum or taffy? Possibly a little of each; but at least make certain that you know which is which, and whether you need meat, gum, or a sweet. And make doubly sure that you will get no more out of a book than interest on what you carry to it. No book can do anything for you, nor will any amount of reading help you, unless you can translate the book you are reading into your own experience or correlate your experience with it. You will get out of any book only what you are equipped to get. To read to kill time is to kill time and generally to deaden your own sensibility to the fact that you have time to kill, that your own vocabulary, your own understanding of the world, is so limited that time, your time—the only thing in life that money won't buy—must be washed out for you by a swim in lethal waters.

And if you want to read yourself to sleep, get a book or a story that will get you as far from the realities of today as you can get. But don't expect to carry into the following day anything or any idea of what it was that sent you into the arms of Morpheus.

Don't wait until you have laid out, or had somebody lay out for you, a course of reading. Thousands of good intentions have frittered away in foam, waiting to decide on a "course." The first step in fording a stream is to make the first step—get your feet wet. Take hold somewhere, be your own guide if need be, follow your nose. Only remember that it takes an expert to get much of value from offal, and that the society in which you and I live is so constituted that it offers its highest rewards to the builder, the creator, the inventor, the discoverer. If you would join that throng, if that is the direction in which you wish to go, you will do well to heed what you read.

For there is a "royal road" to learning—from books as from anything else. Have you found that road?

CHAPTER XIII

WHAT IS YOUR "ROYAL ROAD" TO LEARNING?

NEVER before was there so much worth learning; never before were there so many people eager to learn. But many still cherish the illusion that learning is a secret which college professors only can reveal to initiates in halls of learning; and they go through life with what they got from the public school—curiosity satisfied about nothing in particular, stimulated to nothing new, and with neither tools nor technique to satisfy curiosity. No wonder they feel that they are through with education forever and never want to enter another school-room or see another text-book! They become morons—adults with a child's intelligence. But ever larger numbers yearn to learn more; they would revive the curiosity of their youth. Where will they turn; how will they go about it? Is there a royal road to learning?

There must be or there would be no royal learned societies, no immortal geniuses, no human history, no human beings at all—we should all be apes. My father gave me the secret of the road when I was a boy: Where there's a will there's a way. Use your brains!

But where can I find a "will"? How can I use my brains?

Did it ever occur to you that you learned more in the first ten years of your life than you learned in the next forty? Or that you could learn more in the first twenty years than you could in the next hundred? You were born with a will and more brain than you will ever use; your brain was not yet set, you could use it to find the way you willed.

"But the 'will'—I never wanted to learn." Learn what? You learned to read—which is more than an ape can learn. You could not have learned to read if you had not used your brains, and you would not have learned to read if you had not wanted to. Learning to read is an enormously complex process, and may be an enormously difficult task. You wanted to learn because everybody was doing it and because you were "encouraged": parents and teachers smiled at your progress and patted you on the head, giving you courage; you learned it "easy as pie." To will is to want.

How do you get what you want—by crying for it? That may have served you as a child, but you get it now by going after it, or asking for it, or making it—using your feet or your voice or your hands. What do you do with it when you get it? Eat it, drink it, fondle it, embrace it, talk to it, wear it, enjoy it, admire it, smash it, or kill it: thereby satisfying some organic need such as food, water, or mate hunger, or relieving pain or the distress of excess cold or heat, or gratifying some social want, curiosity, whim, prejudice, fancy, ambition. You begin with a few simple needs; you soon want the earth. Needs and wants together drive you here and there, up and down, everywhere, into everything, wherever your fancy takes you. To need, to want, is to will.

Does all this seem too primary or too personal? Well, large learned volumes packed with ponderous words have been written on the Will—and they throw as much light on why I Will to write this, or why you Will to read it, as my cigar lighter would throw on an eclipse of the sun. Your ten-year-old Billy does not want to learn to swim: you take him to a doctor (and properly). Does the doctor find the answer in his Will book or in your Billy's stomach: what has turned that boy against water? The Will no more resides in the brain than in the liver; it resides in Billy, in you, in me. There may be such an entity as "free" Will: but free from what, and whose Will—yours, mine, or Billy's?

So it is with us here. We must get our feet on the ground or our royal road will be up in the air. Why should we learn *anything,* anyway; what makes us *want* anything; what do we learn *with;* where do *brains* come in; how do we *learn;* how *long* can we learn; *what* is there to be learned? To put it another way, I cannot build a learning story that you can build anything with unless I use blocks (words) that you can recognize as parts of a living human being.

The keystone of my building blocks is a new-born babe, oldest object known to man, last to be understood. Take a look at it, and assume nothing that the eye does not reveal. Its parents are humble and healthy. It is normal and in no wise distinguishable from the general run of one-a-minute infants.

Is its career predestined? If so, why talk about it further; why not call in a star-gazer, or some other dealer in futures, to read its destiny? I cannot read futures or predict fortunes. Obviously. And I venture the assertion that no seer can predict the character of that babe twenty years hence any better than I can predict the weather twenty years hence, or half as accurately as a competent astronomer can predict the position of a given star a thousand years hence.

If we cannot predict its future, what can we do? Look at it. What does it know? Nothing. What can it learn? Anything. Why should it learn anything, anyway? Because nobody will love it if it doesn't. Dogs are loved, but not idiots.

Helpless infancy is prolonged in human beings as in no other group of animals; human youth is the outstanding fact of life on this earth. Months pass before the child can say its first word, take its first step, or bang its rattle on the crib with unerring aim; years, before it has learned really human ways; still more years, before it can marry or vote.

I have deliberately stressed this point. It is significant that, born without any knowledge or learning whatsoever, we *can* learn, and learn so fast and so much that within twenty years we think we know enough to reform the universe. We need no special instincts, or specific talents, bents, or inclinations; it is enough that we are born of human parents—they will bend us to incline their way, and supply opportunity to develop talents.

Why does the new-born learn? Because it is driven. We have now reached the will. What makes us *want* anything?

Every living organism is driven: plants, by the sun; animals, by the energy released in their bodies and originally captured from the sun. The new-born enters the world with some of that energy stored up in its body; it got it from its mother. When that energy supply begins to run low, the infant's stomach begins to growl—literally. The growl is a food call; it drives the infant to fret, to slash its arms, to cry. Later, that growl will drive it to the pantry or to a restaurant.

Hunger is fundamental. It has driven men mad, to cannibalism and civilization, and to all the recipes known to all the cook-books written and unwritten.

The hungry infant's "will" for food can only drive it to squirm and cry. Later, it will want only certain foods and be driven to find them. Parents will teach it. It will learn to organize squirms and cries into a definite repertoire of actions in motor and voice mechanisms.

The infant is subject to other drives, of course. In fact, it is an aggregate of mechanisms which can be touched off by specific stimuli. One stimulus will cause it to sneeze, another to blink its eyes, another to sweat, another to shiver. Others will drive it to cry with pain, or to terror or anger.

At puberty, the drive for a mate enters its life. The food hunger drive must be answered or the child dies; the mate hunger drive must be answered or the adult's race dies. These two drives are fundamental; but hardly more so than the drive to seek shelter from sun and snow, to distinguish friends from foes, and in general to adjust ourselves to all vital stimuli.

We learn to satisfy these drives in specific ways. The drives themselves are innate; our answers, or the ways we are driven to satisfy them, are acquired, learned; they become habits; they make up our manners and customs; they are our civilization.

What do we learn *with;* what do we "answer" with? This is no catch question. You probably would say that the youngster learns with its mind, that with growth it trains its mind, and will then have a trained mind. Possibly the youngster has no mind. I can't find it; I can't discover that I have one. "Well, with its brain, then." It certainly has a brain. If its brain is below normal, it can learn very little; but if it is normal, it can learn to use its voice organ to talk with and its motor mechanism to go about with and to handle things. The child can soon do thousands of things with that motor mechanism: go to the pantry when driven by hunger, to the market for food, bring it home, prepare it, cook; skip a rope, play ball, sew, sweep, drive a motor-car, dance, turn somersaults. What is there that a normal boy or girl cannot learn to do with his or her motor mechanism in fifteen years!

In a few months the child can learn to speak its mother tongue, and in a few years so many words and so much about their usage that with words it can build things, plan things, sum up the past, review the present, prepare for the future, and manipulate the universe at a school desk, in an armchair, or while driving across country in an automobile.

You learn, then, with motor mechanism and with speech organ: you learn to do, you learn to say and to think—and also, of course, to read and to write. But reading, writing, and thinking depend primarily on the learning of words—words as symbols for things, actions, qualities, relations. I am now using my motor mechanism to write on paper words I learned with my speech organ. I may write a word which I have never spoken aloud but learned by saying it to myself—"thinking" it.

Brains come in here—as the "central" of a telephone system so connected with all parts of the body by incoming and outgoing wires (nerves) that you and I can act as individuals and can learn to behave as members of society.

You are hungry: the hunger message is carried to your brain on a wire (nerve), where it is transferred to another wire leading to action. What? Infantile action at first, but later learned action—you go to pantry, dinner table, restaurant. Further orders descend from your brain to your speech organ: you order your meal. You eat. The hunger drive is now satisfied and you can attend to other things—play with your toes if you are a baby, or resume work or play if you are an adult. Or fatigue messages to brain may drive you to yawn—and so to bed.

How do you learn? By doing what you were told to do when at first you didn't succeed: try, try again. You learn by experience—and fast if it hurts. Look at the babe again. Its growling stomach telephones "hunger" to its brain, but its brain has not learned yet what connections it should plug in to cause the babe's speech organ to say, "Let's eat," or its motor mechanism to carry it to food. After years of experiment such connections will have been found between brain and muscles of motor mechanism and speech organ, so that the youngster can satisfy the hunger drive with neatness and dispatch.

These neural connections, whereby the drives of life make their exit in beautifully coördinated and controlled action in hands and feet and body in general, and in voice organ in speaking or thinking, become marvelously perfect. In an almost incredibly short time any normal boy or girl is carrying out various complicated movements in walking, dancing, skating, *et cetera,* and in manipulating things with the hands; and carrying them out with such precision and with such seeming lack of effort that they might be instinctive performances. Likewise with the speech organ.

But these performances are not instinctive; they are *learned* performances. We do not inherit them; we only inherit the mechanisms and capacity to learn to use them in various ways. In learning, paths get worn, as it were, in the nervous system; enormously complicated acts issue as though they were instinctive. Practice makes perfect.

Born without habits, we acquire habits. In ten years we can acquire enough useful habits of walk and talk to carry us through life. That makes it easy for us to take on new habits, and gives us time to learn new things. If we don't want to learn anything new, we have lost our youth; and if we can't, we are old.

And that is the answer to, how long can we learn. The saddest word of tongue or pen is not "might-have-been," but "cannot." I can respect the "cannot" of a man of sixty with flabby muscles and pendent paunch who keeps away from a tennis court, but his inability to entertain a new idea or take a fresh look at an old one is a sign of old age. Normal old age should be only less delightful than youth, but premature senility is plain tragedy. The youths and middle-aged who cannot!

Why can't you? Well, you can't do, act, or look your best if you don't feel all right inside; and you can't feel all right if you are scared.

That element enters into all our learning. Many boys and girls lose valuable time in getting up their courage to take hold of whatever it is they are trying to learn. If you are harassed by doubt that you can succeed in this or that, or master this or that subject, or learn this or that angle of whatever business or profession you are in, you are not on the royal road to learning, but are losing time fording streams, making détours, dodging imaginary enemies, and climbing mountains which could be taken in a tenth of the time through the tunnel.

Emotion alone moves us, but there are emotions and emotions. When you and I are feeling good, we can go far; if we are afraid, we may break our record, but we run away from something, and most of us can get so sick we can more easily faint than run. Faint hearts no more win fat successes than they do fair ladies.

Your body is not connected up to an electric power wire; you manufacture your own power—by burning the fuel you eat. You have at your command only a limited amount of power at any given time. Your body requires its share of power to keep you alive, but when you try to learn a new trick you must have the energy for that particular task. Your body, speaking figuratively, must be under such control that it remains cool, and the mechanisms or organs which you are using in learning must get enough energy to enable them to work at maximum capacity without getting hot. The cold sweat of fear means that your energy is going into heat and not into work.

I can get work out of my arm even though my foot is asleep, but I will get better work out of it if my foot is resting quietly. I shall not get first-class work out of my arm if my leg aches. I shall not get far in a new undertaking if I have learned to shy at everything new because probably difficult and possibly dangerous.

We shall have millions of morons as long as millions are aged in youth. They go through life "cannot-ing" because they have failed so often they "can't" more easily than they "can." "Can't" becomes a habit. They don't lose races; they don't start. They can plod the byways, sweep the streets, do the drudgery, but the royal road to learning is closed to them. Mature at twenty, they are old at forty, and as good as dead at fifty.

Enter the shark, the faker, the quack, the mountebank, the charlatan. He can (at so much per lesson, in courses; or at so much per volume, in sets) teach the moron how to convert a ten-horse-power brain into one of a hundred horse-power; stop stuttering, and qualify for grand opera though his voice be destroyed; accomplish miracles, by learning the secret laws of miracles; talk before his club, address a board meeting, respond to a toast, make a political speech, sell more goods, train his memory, develop self-confidence, acquire a winning personality, strengthen his will power, become a clear and accurate thinker, and be the master in any situation—"almost overnight"; learn to play the piano, ukulele, harp, saxophone, or trap drum "as easy as A B C"; learn how his subconscious mind affects his success, why his dreams mean success or failure, whether he ever loved two women at the same time, and whether he really is in love; become a detective without experience; add fifteen years to his life; triumph over wretched old age, retain his vim and vigor, and make love life-long.

One charlatan offers such an astounding bargain that I am tempted to stop right here with his name and address—but you can find it in any magazine specializing in that sort of thing. He offers to teach us—in fourteen lessons: How to get and stay well, build a perfect body, keep youthful, develop genius, mold an indomitable will, think correctly, outgrow limitations, use the silence, restore inner harmony, understand children, cure jealousy, banish fear, worry, and hate, overcome all negative emotion, build a triumphant life, and get what we want—easily worth, as an enthusiastic subscriber to the course testified, a million dollars!

There are three categories of quacks: venders of health, wealth, and wisdom. A superquack promises all three—for a five-dollar bill! Could Aladdin's lamp, a sultan's carpet, or fairy genii do more, or Mephistopheles himself promise more?

A.D. 1929. Era of science? Era of credulity!

I should think that anyone with sense enough to be at large would ask himself how it comes that the man who knows how to change his life at will and get what he wants should have to peddle such priceless information for a living. It really seems incredible that many people could be so gullible. Yet they must be, or there would be no such daily, weekly, and monthly flood of advertisements, costing hundreds of thousands of dollars. What an indictment of our colossal and luxurious educational system!

Isn't it plain that the man who sells a scheme whereby a "dub" can turn himself into a "fascinating personality" or a "great financial success" obtains money under false pretenses and is either a quack or a crook, or both? The buyer of such a scheme is no better than the ignorant Negro who buys a black cat's wishbone, warranted to bring luck in business, love, horse-racing, and craps; or a Tie-'em-Down

Powder, guaranteed to keep a husband at home. These two fairy godmothers were recently sold by the Oriental Institute of Science—the "Institute" is now in jail.

The real point here is not credulity or charlatanism; it is that a moron once fooled is thereafter more inevitably moron. False promises are worse than misleading, and the man who sells them steals more than money. False promises lead to false hopes, which make for lack of confidence and for discontent. The chronic discontent generally ends up in a poorhouse, jail, or insane asylum.

Confidence is the opposite of fear. The business of fear is to get us away from things; confidence gives us the courage to fight, and in defeat the strength to try again. Ignorance more often spells cowardice than inability.

Pick out the thing you know least about and would give most to learn. The charlatan comes along and says, "I can teach you—if you have the money"; he does not stop to inquire whether you have had any groundwork on which you can build what he offers you. All he says is: I can do so and so; the cost is so and so.

Take an extreme case. Because, let us say, of my early training, I am up to the eyes in trouble. My home life is unhappy, I can't get along with my children, I don't get along with my work, everything goes wrong. I am so harassed and driven that I am almost crazy. You come along and offer me a ten-dollar set of lessons, a three-dollar subscription to a magazine, or a thirty-dollar set of books, which will teach me how to find myself, resolve all my troubles, get me a new job, push all the clouds away. I am a bit shy, but you laugh at my skepticism: "See what I have done for So-and-so, and So-and-so, and So-and-so," and give me pictures of men you have lifted out of the valley of despond and set on a mountain peak. And I bite.

At the end of the year, where am I? I don't know. But I do know that there is no large insane asylum in the United States today which does not contain one or more men or women who would not be there if they had not had their little faith in themselves swept away because they failed to get the returns promised them by some mind-healer or fortune-maker.

Tell your boy of three that a red-hot poker will not burn him, that a rotten ladder will support him, that any stray dog is to be fondled, that mules are harmless, that the ice will always hold him, and so on and so on. Do you teach your child that way? Do you hold out false promises? With a few months of that kind of training your child is timid, backward, diffident, shy, cowardly: of such is the world of morons and of the timid who have lost faith in their own eyes.

Why this army of fakers? Primarily because honest-to-goodness text-books are stupidly dull and because school-teachers still regard themselves as the keepers of secret formulæ not to be imparted to youth except under pain of knocking out a tooth, tattooing the breast, or other rite such as our ancestors practiced on adolescents.

For example. Choctaw is one of a few hundred languages I never studied. Suppose I want to learn it, and have the time. I report to the head of the department. Will he smile with joy at the chance to teach this young idea how to shoot with a new tongue? Maybe; but my guess is that he will try to look learned, and end up a solemn discourse on the value of Choctaw with a "but it is a very difficult language and you must be prepared"—to have a tooth knocked out.

What next? Well, if Choctaw cost *me* a tooth, I'm not likely to let *you* off with less.

Result: School-teachers taking themselves too seriously and behaving like medicine-men; text-books as solemn as mediæval dissertations on theology and metaphysics, and to a boy or girl of 1929 athirst to learn, as inviting as crystallography.

Result: Once beyond the college walls no normal youngster ever wants to see a text-book or meet a school-teacher. But there are a thousand things he does want, and hundreds of people he does want to meet; and he turns to the fakers who guarantee to supply his wants. That is something school did not guarantee; it probably did not even ask him what he wanted.

This is not an attack on the little old log school-house, or the big modern marble university, or upon anything; I am trying to describe some facts that bear on our text. And to the facts already noted add this: the keepers of the magic popularly called education have never hesitated to crucify real teachers. By "real" I mean teachers who believed that to educate meant what it said—to lead out—and not to initiate into a mystery by knocking out a tooth or bestowing a cap and gown.

To name but three: Socrates, Darwin, Charles William Eliot. You may be surprised at the mention of the illustrious late president of Harvard, but the truth is that when Eliot became president, American educators would have crucified him if they could—and their excuse would have been comparable to the verdict which placed the fatal cup to the lips of Socrates. Eliot had no patience with intellectual snobbery. He wanted to lead men out; he did not want to stuff them with mediæval formulæ.

Now you and I, and Tom, Dick, and Maud, grew up in an atmosphere which held "book learning" more or less sacred. Sacred things are not to be exposed in the market-place or expounded in the Vulgate, but only in the classic halls of learning and in Latin or Greek words that look imposing and cannot be understood by the vulgar. Hence our suspicion of a teacher who talks our language, and the academic disapproval of the teacher who meets us halfway.

For example and to be explicit: the very title of this chapter will arouse the suspicion of those who believe that learning must be learned in a school-room or a school-book, and the scorn of those who believe that nothing worth learning may be found in a magazine not edited by a Ph.D. or sponsored by a learned committee. Between the suspicious and the scornful is where we come in—you and I who want to know and have learned not to depend on luck or invest on tips or accept a gift-horse until we have examined its teeth.

Don't be afraid of a book on a so-called learned subject just because you can understand it. Forget that you are Christian on the rough road to the city of Perfection; forget the awe you acquired for wisdom and your reverence for men in cap and gown; take hold of the thing you have decided to learn; take hold of it any place; and if you like it, don't be discouraged. In other words, don't be afraid of a book because some old-maid school-teacher has sneeringly dubbed it "popular." The world's masterpieces in science, art, and literature are masterpieces because done by masters for the masses.

But avoid the book which promises to "get" your lesson for you; and if it has a grain of wisdom in its mountain of chaff it is all the more likely to let you down and perhaps land you in disaster. You can starve to death eating a strawstack, even though it contains three grains of wheat. For "book," read also teacher, article, magazine.

No, we are not to despise any guidance or assistance we can get in school or out, but we may be certain that we cannot get some one else to learn for us; we must do the learning ourselves.

Can you conceive of Tilden's learning to play tennis by taking lessons in college or a course in a correspondence school? Was there anything in all the books in all the libraries in 1859 which would have enabled Darwin to demonstrate that species had evolved naturally and not been specially created? Could any school of dramatic art or correspondence course have taught Chaplin how to become the consummate screen clown that he is?

Tilden learned to play tennis so well that he can play through an ordinary game with scarcely more heed than you yourself gave this morning to putting on your clothes or eating your breakfast. You learned those lessons so well that with stimulus of daylight and clothes you dress automatically, as it were; or, under the drive of hunger and with stimulus of food, eat like an automaton.

To pilot a plane over land or sea means knowledge of various kinds, knowledge which must be acquired; but it means primarily such control over the body that it instantly obeys orders from the brain which originate as sensations in eyes and other organs of sense within or on the surface of the body. Such coördinated movements can only come by learning through trial and error. We do learn by experience.

All that has ever been written about flying and the mechanics of airplanes could not have given Lindbergh as valuable a lesson as the one he learned in infancy when he could put his finger on the spot which stimulated his eye. Nor could any book-learning teach him such control over the joy-stick of his machine as he could learn in an hour's manipulation of it. Nor could all the psychologies in the world, or all that physiology knows of bodily changes resulting from fear, have given Lindbergh as much confidence in himself as he could get in an hour's actual flight. That confidence would make the next hour's flight easier. The experience gained in two hours was available to help solve new situations which might appear in the third hour. That kind of knowledge is not to be learned from books.

Now turn to achievement of a different sort, that of a Darwin or an Einstein. They too get stimuli through eyes and ears and other sense organs. Each has his drive in life, the thing he loves best to do. Each observes. Can he describe what he observes? If there are no words adequate to express what he has seen or conjectured, he must define certain words anew, or invent words which will serve his purpose. He can then build: Darwin, a conceptual hypothesis for the evolution of life; Einstein, a conceptual hypothesis of a four-dimensional universe.

Teacher or text-book, school or college, or popularized science, may offer opportunity, point the way, clear the way of encumbrance and illumine it, and suggest better ways of traveling; they may encourage and hearten, and if really great, can so enthuse the traveler that he glows as though inspired. But the one thing no one can do is to travel the road for you; that you must do yourself.

School children start out with a certain amount of curiosity—not as great these days as it should be, or it would not be so easily satisfied. But while their curiosity will cause them to monkey with things, mere handling will only make them dabblers or at best dilettantes. Curiosity has a higher value now than it had for our ancestors. Theirs led merely to monkeying; ours leads us to the stars: to fly like Lindbergh, to play tennis like Tilden, to amass a fortune like Ford, to win votes like Coolidge, to understand nature like Darwin, to describe the universe like Einstein, to amuse millions like Chaplin, to discover microörganisms like

Pasteur, to propound a rational theory of disease like Koch, and to capture electricity and make it toast bread and haul freight across continents.

I said "leads"—I should have said "drives." The stars I have spoken of went far because they got on a road they loved to travel; they loved it so well that they could not be stopped by mere obstacles or lured from the track to go fishing. They made their road. They were driven to it.

What *drove* Coolidge from law to politics, Ford from a mechanic to a manufacturer, Chaplin from vaudeville to motion pictures, or Darwin from medicine and the ministry to natural history? Suppose Coolidge had stuck to law, Chaplin to the vaudeville stage, Ford to mechanics, Darwin to medicine? Well, they did not stick; and the outstanding fact in their careers is that in doing what they wanted to do they made careers. They found the way they willed and used their brains.

When our innate curiosity about everything becomes focused on knowing or doing one thing, and our primordial drives for food, mate, family, friends, comfort, and happiness become centered in that one thing, we are set to play a star part. What part will you play?

What is your aim in life? What would you rather do or be than anything else? What special job or particular line of work or pursuit satisfies you, soothes you, exalts you, inspires you, realizes your greatest ambition; into which you feel yourself inevitably driven and for which you seem naturally fitted? Circumstances may prevent you from ever finding yourself so happily engaged, but if you are, you have found your vocation, your calling. It is as though the strings of your body had become attuned to certain chords; when those chords are struck you vibrate; all other notes are discordant and set your teeth on edge or at best let loose no emotional surge in you to jump or fly or compose. Early conditionings get you set to go easily forward in certain directions, to shy at or be provoked or discouraged in other directions. Your royal road to learning is the one on which you find satisfaction and the mere traveling of which gives wings to your feet and brings gladness to your heart.

How far you will travel depends on many factors, some already noted; but your progress will obviously depend on circumstances, opportunities. A boy of twenty a few years ago might have dreamed of flying, his whole life's passion might have been summed up in that one word, but he could not have got far from the ground, his passion would have been a mere daydream. Today such a dream can come true. How? By action—learning to fly. The whole world today is one vast opportunity.

The first step is not necessarily the hardest, but it is the inevitable step; thereafter we need only keep learning more steps. Thus, with hands we build new things, better bridges, longer tunnels, better airplanes; with words we formulate new ideas, judgments, inferences, hypotheses; manipulate nature to more varied ends, recast the laws of nature that nature may be better understood, and reformulate the laws of human society that human beings may live more free from fear of the unknown, with more happiness for themselves and for their fellow men, and with more surety for living out their full span of years.

There is a royal road to learning, and enough remains to be learned to keep our children and our children's children to the *n*th generation young with the joy of learning. They must travel life's road no less than must we who travel today; we can clear the way that they may in increasing numbers travel more royally.

And what makes for royal living? Learning to live royally. To live is to learn; living is learning. Youth lives fast, learns fast—and thereby learns to preserve its youth.

Have you preserved yours? If life looks good to you, if you feel good and are happy, buoyant, confident; if you live fast and find the going easy; if your curiosity plays with the past for today's and tomorrow's sake; if today seems precious for its own sake and more precious than yesterday; if you fear no unknown and hate nothing but ignorance; if you can still acquire new habits, construct new thoughts, and create new ideas—you are biologically young, no matter what the doctor says about your arteries or your eyesight. And being young, you find learning by living easy and delightful. That makes for royal living; and that, in turn, makes the road to learning royal.

"Preserve your youth." By that I mean especially what is commonly called an "open mind," and that can only accompany a living body that still functions as a going concern. But that does not imply that a "closed mind" is not sometimes found in a youthful body. Which brings up another important question—What is the difference between "mind" and "body"? And *your* mind, is there anything wrong with it?

CHAPTER XIV

WHAT IS WRONG WITH YOUR MIND?

IF ANYBODY had asked me when I was a youngster if there was anything wrong with my mind, I should have been insulted; today I admit it without question. It was not polite to inquire about people's minds in those days—the question hinted at insanity; and insanity, while no longer directly charged to a "possession" or an evil spirit, was still rated as an inscrutable, incurable mystery which doomed the poor wretch to endless degradation in an asylum and his family to eternal disgrace.

Among my vivid boyhood recollections is a visit to the huge asylum for the insane at Columbus, to which I was taken on my first visit to our state capital. What a place to take a boy! you say. Well, it was one of the things to do. Just as on a first visit to Washington one had to see the Capitol and the White House, so the Penitentiary and the Insane Asylum were Columbus "sights" not to be missed.

I got the impression that if I had to choose between the "Pen," as we called it, and the Asylum, I should prefer the former. After all, a criminal was only a criminal and there was some hope for him; none for the insane. Insanity carried stigmata that could not be rubbed out; one could atone for a crime. But even while I felt the creepiness of the long corridors of the Asylum I was sure *I* need not fear it, for insanity "ran in families"; and there was none in ours.

Some ten years after that Columbus visit, one of my playmates disappeared. We were told in a hushed and awed voice that he had been taken to the Asylum, "hopelessly insane." Some years later another boyhood friend passed out of my life. He had been sent to the "Pen" for life for having murdered a girl in an adjoining county—not hanged, because when he committed the deed he was not in his "right mind."

Is there anything in common between criminality and insanity? Are they "diseases," and if so, what is it that is diseased, and is there any "cure"? What is insanity, and does it "run in families"? What is "mind"; if you lose yours, just what is it you have lost, and could you get it back? Is there anything the matter with your mind?

What a change in our attitude toward the weak-minded and the demented since I was a boy. And a change, by the way, more important for human sanity and happiness than the change brought about by the airplane and the wireless. In a civilization as crazy as ours, it is no longer a disgrace to be insane, and no more an insult to be asked about one's mind than about one's baby or one's liver.

There are today nearly half a million of us in asylums for the insane, with an annual new crop of nearly a hundred thousand. In New York State one adult out of every ten enters an insane asylum or "mental hospital" before death. And presumably every one of the remaining nine will at some time or other as definitely need a mind doctor or psychiatrist as the one who has actually sought treatment. Perhaps sanity is more prevalent in other states than in the Empire State. But these figures are startling, and bring our questions close enough to home, whether "home" be New York or California.

Sanity; insanity. These two words seem to imply a contrast between two fundamentally different conditions; but the difference between sanity and insanity may be less than the factor behind a recent decision of the United States Supreme Court where the case was decided by a vote of five to four of the nine judges, one of the five having formed his decision by flipping a coin. In cold, sober fact, most of us at large are more or less sane, more or less insane.

The idea that there is a sharp distinction between sanity and insanity goes back to the time when "mind" was supposed to be a definite entity like liver or heart. As one could suffer from liver complaint or heart disease, so one could suffer from a diseased mind, or even lose it. The distinction is beautifully drawn in the oft-quoted injunction of the Latin poet Juvenal, that we should pray for *a sound mind in a sound body*: *Orandum est ut sit mens sana in corpore sano.* That line explicitly implies two things: the existence of "mind" as distinguished from "body"; the independence of the health of the mind from that of the body. It seems likely that Juvenal used *mens* (mind) much as the Greeks used *psyche* (soul). Certainly the idea that mind (or soul) and body represent two sides of an antithesis is a very ancient one and persists not only in modern text-books but in the word psychology itself—which is still defined as the science of the mind (or soul). How the idea of soul (or mind) arose is no concern of ours here, but we may properly be concerned with the fact that in twenty-two hundred years psychology got no nearer defining *psyche* than its founder, Aristotle, did; or *mens*, than Juvenal did.

Why talk about "mind," then? Because that is the point of this chapter. If there is no such thing as mind, we should know it, and govern ourselves accordingly—stop worrying about it and get on about our business.

And first, let us see if we can find something just as good as "mind"; something which can be talked about and described and understood.

What is it, in court, that appears before the judge and jury which are to determine whether the accused shall be committed to a penal institution or to a lunatic asylum? This is a simple question and there is no catch in it. The answer obviously is: a living human being, an individual, a personality, somebody for the time being in difficulty and suspected of or charged with some form of behavior so unusual, unnatural, or anti-social, as to make the individual a menace to self or to society. Judge and jury decide that the individual committed a crime—that is, violated the criminal code—and the individual is fined or imprisoned or both. Or judge and jury, with the aid of medical experts, decide that the individual's conduct is so anti-social—that is, so outside the range of normal behavior—as to warrant detention in some institution specially adapted to such individuals.

In other words, if I am committed, it is I, all of me, who am committed, and the thing for which I am committed is some overt act of abnormal behavior: I have broken some law or some norm of social behavior. The nature of the institution to which I am committed depends on the decision of those deemed expert in legal and social behavior.

For example, I am caught rifling a till or picking a pocket. There is a specific law against theft. That law is invoked against me and I am sentenced to prison. Or I develop a sudden and pronounced streak of philanthropy. I give generously to every beggar I meet; begin to make large contributions to every known form of charity; even seek opportunity to give funds to a society for the perpetual preservation of cats' graves, and finding none, take steps to found one. There is no law against that. No one would accuse me of being a criminal.

But suppose I insist on founding a society for providing free morphine to addicts, would the law now interfere? Quite likely. But before I had reached that stage, it is more than likely that some one else would have interfered—wife, parents, children, friends. Philanthropy is philanthropy and a social act; but when I propose to give away what I have left to endow a society to keep cats' graves eternally green, some member of my family is likely to set legal machinery in motion to restrain me. Because I have lost my mind? No; because I am proposing something unusual, pushing a hobby too far, acting in an unsocial way, robbing my family of what they regard as their just inheritance or their just claims on my estate.

Again, I kidnap a child, in itself a heinous offence, justly carrying a heavy penalty. But suppose I happen to be the father of the child, and from my point of view am entirely justified. The situation now is quite different so far as I am concerned, but to the judge and jury (too often a callous politician and a dozen morons as fit to judge human motives as a hangman and a crew of pirates) before whom I am haled, evidence may be brought to show that I am a loafer, a vagabond, a man of low character, utterly incompetent to rear a child, and hence, that my only motive in the deed must have been criminal—or insane.

In other words, the common factor in criminality and insanity is that there is always a human personality involved; and that the decision as to whether the behavior of the individual was criminal or insane depends on the convictions, beliefs, and judgments of other human personalities, and on the interpretation of legal and social customs and manners. And the line, I repeat, between the criminal and the insane is often so shadowy and vague as to depend on a merely fortuitous factor, or excess numbers or weight of witnesses, expert or otherwise. As a matter of fact, individuals may be judged both criminal and insane and committed accordingly.

Take a concrete case. I have an old boyhood friend, now in middle life and the respected head of a family. I have watched his actions closely for the last ten years. I cannot decide whether he is to end up in an insane asylum, a penitentiary, or an institution for the criminal insane; but it is an even bet that sooner or later he will do something so desperate, so abnormal, or so anti-social, that he will be haled before some sort of court. Why? Because he is in difficulty, handicapped; he is groping in the dark, as it were. And yet one who did not know him intimately would not suspect that he is desperately in need of . . . what?

I am not certain that I know; I do not know him intimately enough to know his deficiency. I do know that about once a month he seeks the only way he knows out of his difficulty—an overdose of ethyl spirit, commonly known as "hooch." A mutual friend remarked recently that he thought the man must be "losing his mind" or he would not go off on such wild rampages. But as I see it, these wild rampages are his source of relief from a reality which is more than he can stand, the only relief he knows. Yet he knows well the danger of these sprees and their effect on him, and he comes out of each one—when he is really out—with the finest resolves in the world, and for weeks may go along serene and contented, watching his children grow handsomer, his fortune larger. Then out of a clear blue sky, as it were, he is off again—a madman and a menace to the first one who crosses his path.

The common factor behind all these cases is a human being acting unusually, strangely, criminally, or insanely as you please. Now your normal behavior and mine, or any act of behavior of yours and mine, is dependent on more factors than I could name in a week; but there are certain factors which are always present, which can be named, and which must be looked at. First and foremost is the nervous system. Cut the nerves going to my hand, my hand is numb, dead, I cannot use it—it has lost its "mind." Destroy the nerve cells in my central nervous system which are responsible for the impulses which are transmitted over the nerves to my hand, and again my hand is numb, paralyzed, dead.

Your normal behavior and mine depends on the normal functioning of our nervous system. Too many things can throw this system out of gear and interfere with its normal functioning to be named here, much less described. But four must be named because of their prominence.

Certain poisons have special affinity with the central nervous system and throw it out of gear, among them alcohol and morphine and their derivatives. When our Central is out of gear, you and I are out of control; all forms of behavior dependent on Central become abnormal.

Again, certain acute or chronic infectious diseases may break up the normal functioning of the central nervous system and throw it out of gear. Typhoid and pneumonia, for example. Or again, any disorder of nutrition may become the factor in making for abnormal behavior. How many of the disorders of our present society are due to the fact that we eat for our palate's sake rather than for our organic requirements, no one knows; the number certainly must be enormous.

Again, the normal functioning of the nervous system is dependent on the normal action of certain glands. Thus, too much or too little activity of the thyroid gland at once registers in the central nervous system and makes normal behavior difficult or impossible. In fact, the difference between a normal child and a pot-bellied, bandy-legged, idiot dwarf is a tiny dose of thyroxin a day. Our thyroid manufactures that powerful drug; if too much or too little, we are drugged indeed.

While disturbances may be brought on by too much or too little activity in any member of the glandular system, endocrine (internal secretion) or otherwise, yet you or I might be able to do certain things extraordinarily well under such a handicap. But our ability to perform such activities as nature demands and society expects of us depends in general on the normal functioning of all our body.

There are still other general factors which can impair our usefulness, muss up our behavior, or make it seem as though we had, for the moment at least, lost our mind; which, in short, make us behave unusually or abnormally. First among these is prolonged fatigue or intense pain. Either may alter my whole point of view, and if the pain is imposed from without or opportunity is denied me for rest, I might be driven to such a state of exhaustion or desperation as to be willing to admit the commission of a crime of which I know nothing, or to change some life-long conviction merely for the sake of saving my life.

Severe pain has driven men and women to wholly irrational and abnormal ends, even to suicide. Why? Because we are so made that pain has the right of way in our nervous system. The individual tortured by pain seeks a way out, and may under its lashings be driven to thoughts or deeds which normally seem compatible only with madness or insanity. I still recall with horror how, alone in the high Andes, I was driven to sheer madness which lasted for two days by an abscess in my middle ear. During that time I was certainly out of my mind, as the old phrase has it; I had to all intents and purposes lost my mind. For two days

I acted, talked, thought, and felt queer; I could have committed murder or suicide.

Again, certain kinds of injuries to the brain from certain causes may make normal behavior impossible, may bring on unconsciousness—that is, absence of normal waking ability to be aware of what is going on and to name it. Consciousness may also be temporarily snuffed out by fatigue alone, or by a drink of alcohol, a whiff of ether, or a blow on the head.

In general we can say that our habitual behavior may be upset by an injury, a surgical operation, illness, bad physical habits (lack of exercise, bolted food, etc.), prolonged insomnia, or any emotional conflict. If I have been brought up without a good repertoire of emotional habits, serviceable in the age and community in which I live; if I am a slave to unbridled anger or overpowering fear, or either of the two great fundamental hungers, for food or a mate—I am not likely to act intelligently or with discretion, but am more apt to act like a moron. To that extent I will be relatively irresponsible and a menace to society, and society will be justified in making it impossible for me to give way to such uncontrolled outbursts of primitive emotion.

Our jails are overstocked with morons—adults with the intelligence of a child but with adult appetites and passions. They know no trade, have no well-defined purpose in life, no ambition for what, for short, we may call success. These naked emotions, primitive urges, passions to kill, revenge, jealousy, are not only the great factors in abnormal behavior, but the sources of the greatest crimes.

You probably have no difficulty in realizing that your heart may be speeded up by disease; it is not so easy to realize that it can be speeded up as easily and surely, and more quickly, by love. In other words, an abnormal heart can easily have a purely emotional cause.

I cut the nerves of my hand; my hand is paralyzed. But there are other causes of paralysis—fear, for example. Ever since man could name his world and talk about the unknown and about death, fear has played a tremendous part in human life. In its various ramifications it is possibly the greatest single factor in leading to a wide range of pathologic moods. It can even drive to such apathy that one may lead a pitiable vegetable existence. It can muss up our lives day by day with anxiety, depression, blues. Between the madness of the maniac driven by anger and the apathy of the slobbering demented driven by fear, there is little to choose.

Again, vomiting, nausea, *et cetera,* may be due to a purely physical cause, or it may be prompted by sheer emotion, disgust. So anger, pain, fatigue, or any emotional upset, can as surely lead to indigestion and its attendant miseries as mince pie or pickles preserved in formaldehyde. So, too, many headaches have as their original cause an unsolved emotional problem.

Whenever I so lose my mind, then, that it becomes noticeable to my associates, it means chiefly that I am acting strangely in walk or talk or whatever it may be. I am unbalanced for the time being. Some part of my normal behavior repertoire has been dropped out, or my usual behavior is upset; I am not myself. My friends are probably informed that I am suffering from a "nervous breakdown," that being held these days a perfectly respectable disease.

Let us look a little further at this term "nervous breakdown"—and call it a minor behavior disease; it may take one form or another, but whatever name we call it, it belongs to a group of personality diseases spoken of as "mental." They may be brought on, as we have seen, by insomnia, fatigue, brooding, any emotional upset. While psychiatrists are far from agreement as to the names and descriptions of such diseases, they are generally spoken of as psychoneuroses. Three forms are fairly common.

For example, if I may be personal for a moment, I am just now a neurasthenic. Symptoms? I am lazy, stupid, clumsy, awkward, irritable, can't pick up my feet easily or find the word I want quickly; I am easily fatigued, somewhat pessimistic, below par in my appetite, can't go to sleep as easily as I usually do because of overanxiety—about politics, stock market, my arteries, whether to winter in Florida or Portugal. Usually I do not worry about such trifles. But I am not distressed to the point where I believe that I suffer from a grave bodily disease and make my disability a virtue and love to talk about it—I am not a "hypochrondriac."

Why this nervous upset just now? Because a few days ago I underwent an operation and haven't got rid of it yet. Everything about that operation was emotionally tied in. I was unconscious for several hours—ether, lost all my mind; for many more hours I was only partly conscious—drugs. Now tonsillectomy may or may not be a major operation. I took it seriously: it hurt in dozens of different ways and stirred me all up; I am not yet calm. My nerve-centers are easily exhausted. I am neurasthenic. I suffer from a minor behavior disease.

A very dear friend with whom I lunched today has for years suffered from another variety of psychoneurosis. A psychiatrist would say he is psychothenic. But in most respects today he is saner than I am—that is, he is more nearly par; but just as at present I cannot do anything as well as I should like or as easily as I can normally, there are certain things my friend can't do at all. For instance, he can't visit me. I live on the tenth floor.

He suffers from a phobia: he is afraid to get very far off the ground. If he were picked up bodily and put in an elevator and started toward the top of the Woolworth Building, he would certainly suffer the nausea of panic before he reached the fifteenth floor, and might suffer the compulsion to commit murder or some other deed of violence before he reached the top. He knows his fear is unreasonable, but he can't reason himself out of it. He knows the cause of his disease, as do I.

It happened years ago. It is too painful to be repeated here, but it was an emotional upset—that is, he learned in the twinkling of an eye, as it were, to do something in a certain unusual and distressful situation. The performance was so burned into his nervous system that when he approaches a similar situation (crowd or height) he becomes panicky.

Year by year he gets better—by gradually getting accustomed to crowds and elevations. Each year his control over such situations improves. He is reconditioning himself, undergoing a retraining process. Situations of that sort no longer paralyze him, as they did formerly. By and by he will be able to face a mob, just as the most shell-shocked soldiers can be restored to reason. Thus, the part of his "mind" which he had "lost" is being gradually restored to him. Thus, and in general only thus, do we get back our "minds" when we lose them. I shall cease to be neurasthenic when my debilitated nerve-centers are pepped up again.

The third form of psychoneurosis is more prevalent among women than among men, and not inappropriately was named by the Greeks hysteria (*hysteron,* uterus). Hysteria is the most prevalent of all minor forms of losing one's "mind," and has had more to do with some of the weird beliefs of human culture than any other one disease. Scrawny witches, wild-eyed medicine-men, and rabid reformers of all ages and climes were presumably psychoneurotic and suffered from some form or other of the disease called hysteria. The hysterically upset are the abnormally emotional. They depend on their emotions to win victories they can't win by reason or sheer brute strength. In extremes, they will have their way though the heavens fall and even though they themselves must become deaf, blind, and halt. In other words, hysteria can and does lead to mental upsets, to "loss of mind," and to actual paralysis.

These psychoneuroses are in general due to faulty emotional habits, sex complications, moral conflicts, selfishness, love of self or some unattainable object, lust, envy, jealousy, fatigue, organic disease, emotional storms, *et cetera*—disorders of personal adaptation masquerading as physical ailments, as they have been called.

There is no sharp distinction between psychoneuroses and dementia. Dementia (*mens*, mind) is a disease marked by more or less total loss of what passes for intelligence. That is, as most of us are more or less psychoneurotic, so most of us are more or less demented. Dementia is a form of insanity: we cannot do what we should do or what society expects of us. There are three well-recognized forms of dementia: *paralytica,* also called general paralysis of the insane, or general paresis; *præcox;* and *senile.*

General paralysis is responsible for about ten per cent of our insane-asylum inmates. It is due to structural changes in the central nervous system brought about by the microörganism of syphilis.

Senile dementia may be brought on prematurely by many and different causes. It may be hastened by various causes: faulty diet, alcohol, diseases of the heart or kidneys, old infections, etc. But anyone familiar with extreme old age is aware of the general impairment not only of bodily vigor, but of bodily activity—lessened ability to walk straight, talk straight, think straight. The bodily machinery is wearing out; the central nervous system also is wearing out. The hardened arteries no longer supply the brain with a normal amount of blood. The muscles responsible for the expression of personality become rigid; certain habits are dropped out; old habits become more fixed. There is a tendency toward forgetfulness and heightened irritability—seen in petty jealousy, for example.

As these behavior changes belong normally to old age, it would probably be a fine idea to kill off all general staffs and allow no one over forty years of age to vote on a question of war or peace, except after medical examination. While old-age insanity may come on slowly or rapidly or too early or very late, and in various forms, and make itself known in various ways, not every crank necessarily suffers from senile dementia.

Dementia præcox may be characterized as a puberty disease because it usually appears at that time, and generally in children in whom no insanity might have been suspected. It is still one of the baffling and most serious diseases of behavior. Such an individual, of course, suffers emotionally. This critical change finds him untrained emotionally to continue a normal life. He becomes more or less hostile toward the world and withdraws into himself until his behavior becomes so abnormal that he creates a world of his own, as it were, in which he lives and toward which he behaves as though it were the only world, even though it may have nothing in common with your world or mine.

I am for the present, and temporarily, we may assume, handicapped. I am not quite normal; I have a diseased personality; I suffer from a mild form of psychoneurosis. I have lost just enough of my mind to prevent me from functioning up to par; my control over my motor and speech mechanisms is not what it is normally.

But I am not suffering from paresis. I am not in the first stages of general paralysis of the insane, nor am I a paranoiac. I have no hallucinations. My cortex can still analyze what my eye sees and my ear hears. I have no grave delusions, and am certainly not suffering from illusions of grandeur. Nor am I a manic depressive. I show no inclination to run amuck, no impulse to take my own or any other life, nor do my symptoms in any way resemble those of feeble-mindedness. My condition differs from all these, and, too, from a normal condition. But the difference between my present and my normal condition is merely a difference of degree, whereas the difference between my state and that of the feeble-minded, the manic depressive, the paranoiac, and the paretic, is a difference of kind. For this reason: the paretic's breakdown is structural, as is presumably that of the feeble-minded; the paranoiac and the manic depressive breakdown is so complete that it may be compared to a chronic disease which runs a normal course.

May I say, parenthetically and emphatically, that in using such terms as sane, insane, dementia, psychoneurotic, paranoiac, manic depressive, *et cetera*, I do so under protest. They may be useful as names for general tendencies, but at best they imply distinctions which do not exist in nature; they are artificial, and most of them redolent of an ignorant antiquity. All of us, I repeat, are more or less sane, insane, demented, psychoneurotic, paranoid. Further, everything I have done today would probably have been characterized by my grandfather as crazy.

"Normal." My behavior right now is, from my point of view, normal. That is, I am doing all that could be expected of one of my constitution, training, and temperament under my present circumstances and in view of my recent hospital experience. In fact, every form of behavior, whatever the degree of insanity, is, from the particular person's standpoint, normal: he does what he is impelled to do under the circumstances and according to such materials (physical structures, including nervous) as he has to work with.

"Normal" is a much-abused word. It is well that we should be clear about this. From the point of view of our own particular training, culture, or civilization, the behavior of entire nations may be deemed abnormal. If at high noon today I should stop in the middle of Fifth Avenue and spread a blanket on the street, turn toward the east, and begin to pray, my behavior would seem so strange that the nearest policeman would want to send me to Bellevue; and yet such behavior, if I were a devout Mohammedan and not obsessed with the idea that in Rome I must do as the Romans do, would be quite normal and natural. Or if I should meet an old enemy against whom I had long carried a grudge for an insult, and begin shooting at him, even though I gave him warning and an opportunity to defend himself, I should certainly be rated as a criminal, if not a madman. Yet murder in the dueling days, and until recent times in the mountains of Kentucky and Tennessee, was a legitimate and natural way to avenge an insult. It is the opinion of the "best minds" in the society in which you and I live which decides what is normal.

Polygamy was normal to Abraham, and incest was no crime in ancient Egypt; human flesh is still good food to my Solomon Island friends, and female infanticide no crime to my friends the Todas; there are wives to whom a beating up every Saturday night is as normal as a bath and as eagerly anticipated, and old women who expect to be clubbed to death as their normal end.

Every society has the kind of crime it deserves, and as much insanity of every form as it cultivates. That we have so many kinds of both today is because our codes, criminal and ethical, are thickly peppered with "Thou shalt nots," whereas society itself—parents, teachers, *et cetera*—neglects to train individuals to accept these injunctions and make them part of their habitual behavior.

It is so easy to tell the hungry man that he shall not steal, or to preach continence to the virile as socially desirable. Frugality in food and chastity in sex may be fine for society, but they are not so easy for the individual, especially in these days of long menus, short skirts, and votes for women.

When I have spoken above of you and me, I meant just exactly what I said: "you" meaning a definite individual, not mankind in the abstract or even the readers in general of this book. It is the individual that behaves; it is a person, an individuality, which has a "mind." When that individual—you or I—becomes diseased in his personality, suffers a nervous breakdown, or what not, it is through factors which directly influence him. Those same factors may operate differently on your sister or my brother, on your father or my mother.

I know of no concept in modern times more significant than that of the individualness of human behavior, and especially the uniqueness of individual behavior. It is well to know the general laws which govern health, and our reactions to the world at large and to our fellow men, but it is also important to know that we as individuals and our fellow men as individuals, while having much in common, are each of us uniquely organized.

Each of us runs a more or less regular course. We begin life as infants, without fixed habits or fixed opinions, plastic, easily molded, pliable, subject to be bent this way or that

—and sometimes bent so far by what seems to be only a slight breeze that we never get quite straight again, although presumably we could if some one took as much pains to straighten us up as a farmer takes with his pet fruit trees.

From this infancy we pass into childhood, where our behavior begins to be organized into habits which function like reflexes. A mouth which will naturally water only in the presence of palatable food which must be masticated and swallowed, or in the presence of iron filings or sand which must be moistened in order that it may be spat out, learns to water at the sound of the dinner bell, or when the sun has reached a certain spot in the heavens, or when we see or smell our favorite dish or hear it named. These conditioned reflexes come to be the decisive factors in our lives. We learn to move toward or away from things, faces, situations, etc., which have moved us in the past.

Whatever mind is, it does not function without a brain; and whatever your personality or mine is, it is not much of a personality without an educated, trained, intelligent cortex. What we are moved to do when driven by anger or by fear, or by any of our appetites—these are the elements which make up our mind for us, determine our attitudes.

With old age these organized habits get set; the mechanisms of the body stiffen; we no longer have the plasticity of youth, though we may revert to childish reactions and ways of behavior. The opposite of youthful plasticity is rigidity, old age set in its ways.

Thus we keep changing throughout our lives; our behavior keeps changing; our personality keeps changing. At one time we can stand a shock which we could not at another time. A gale may fail to blow off my hat today, a light breeze may toss it into the street tomorrow: I have had a haircut or changed my hat. I go out of my front door this morning, my neighbor smiles at me, and I smile back in recognition of a friendly greeting. I go out tomorrow morning, and interpret that same smile as a sneer: I have suffered some misfortune which puts me in an entirely different frame of mind—I am now suspicious. So, with a moment's reflection, you can easily realize that in the same moment you appear as one person to your chief, another to your assistant, and an entirely different person to your wife and to your child; and your behavior, to a certain extent at least, will be governed accordingly.

With this increasing recognition of the uniqueness of individual behavior has come about the recognition of the individuality of the inmates of an insane asylum. Until comparatively recently, insanity was insanity, and the insane formed a sodden mass of humanity—human beings who had lost their minds. Why or what they had lost was hardly asked at all; it was enough that they were insane and confined.

That unknown mass today is being more and more split up into units, and the question that is asked is not about the units themselves, but about the individual: who is this individual; what is his history; why does he do this; why can't he do that; why is he depressed; why this exaltation; why does he claim that he is the son of God; why does she assert she is the Virgin Mary? Especially: who is this individual; what is the cause of his or her abnormal behavior? In other words, insanity is as individual as is the human being who goes insane.

What can we do about it? That depends. There is no known way of restoring a diseased cortex, though much is known of the capacity of the cortex for retraining, reëducation. Most of us do something toward making up for some of our deficiencies, but we can only do that as we know ourselves.

"Know thyself" is one of the oldest injunctions laid on man, and the one most commonly disregarded. Not only should the body be known both as a whole and in respect to its parts, how they are held together, how they function as a whole, but above all, the body should be kept in good condition, properly nourished, properly rested. To eat and sleep well are mighty factors in enabling us to face life well. We admire the endurance of the athlete or the soldier, but pay little heed to the development of our own endurance—endurance for the kind of life we have to lead, the endurance we require to satisfy our ambitions, provided, of course, our ambition is brought within reasonable reach of our ability.

We cannot eat and sleep well if we are continually being moved by loss of appetite, insomnia, or by passions, fears, disgusts, jealousies, longing for the unattainable, or by worry. There are few of us who do not encounter intolerable situations. We can learn to face these, make the best of them; or, if they cannot be faced, to alter them. Remorse for our sins is possibly a wise social gesture, but undue dwelling on them does not help us to encounter successfully the next temptation.

Man cannot live by bread alone. Nature herself has provided a bountiful feast. Partake of it intelligently and according to your needs. All work and no play makes Jack a dull boy. Our bodies were not made for work; they were made for life. The life we are fitted for is a life of work, play, and love, and should not be taken too seriously. When you lose your sense of humor you are less able to keep an open mind and are on the road to losing it. Take care of your sense of humor and your mind will take care of itself.

Curiosity is part of your natural birthright and its gratification should give you joy, but don't forget that curiosity killed the cat and that the eternal quest after new sensations for mere sensation's sake has ruined many a life, destroyed many a mind. Which is to say, don't expect to be normal, natural, and quite sane if you deliberately go in for the abnormal—in food, sex, ambition, power, fame, what not. In the long run, the abnormal is more likely to be stupid or vicious than it is to be a thing of beauty or a joy forever.

Worry about your soul if you must, but don't worry about your mind, for that is one of the ways of losing it—whether you have one or not. And don't worry about what runs or does not "run in families." Most of us are what we are in spite of our families. Insanity does not run in families; it is a cultural or psychological factor and not a heritable or biologic factor. A mean, stingy, hypocritical father may force his son to outbid him in the same suit; a cold, anæmic mother may keep her daughter on ice so long she mildews.

Don't worry about your inheritance—you can't change it. Wonder, rather, that in this insane age boys and girls may still learn to use their legs and develop their bodies and eat of the fruit of the tree of knowledge without shame or sin, and, thereby adjusted internally and externally, can develop a sound mind in a sound body.

How can you stop worrying? I wish I knew: I'd take the cure myself. As a matter of fact, I am taking it right now to the best of my ability—sloughing off the causes of worry as rapidly as possible, solving my personal problems day by day as they come along. My neurasthenia, of course, makes this "solving of problems" more difficult than usual; in fact, it creates problems where none would exist if I were in my normal state of nerves.

So little is known, I repeat, of just what happens in nerve cells, processes, and synapses during fatigue, or during an operation and while under such a powerful anæsthetic that one's entire nervous system is "killed" and one is thereby insensitive to pain or any other stimulus, that it seems foolish to talk about "nerves." But searching for a figure of speech which may at least suggest a picture of what has happened to mine, I think these nerve cells (neurons) may be compared to batteries which are temporarily discharged. As a result, my nervous energy (presumably some form of electricity) is not on tap, as it was before my operation. The net result is that I, as a somewhat disintegrated organism, am below par: I can't shoot as straight as I think I should; my aim is not so steady, my gun is not so effectively loaded.

As a consequence, I worry about little things that heretofore I would have shot dead with a smile.

How can I get back to normalcy? Time itself is a marvelous restorer—provided, of course, my personal situation and my general physical condition are such as to allow the time factor to do its work. If I had to work at a disagreeable task or starve; if I were bound to an impossible mate; or if I were in any way inevitably unhappy—my neurasthenia could easily pass into some graver form of disorganized personality, from which, possibly, I could never find escape, or if at all, only through my enforced withdrawal behind the walls of an asylum.

To speak more plainly, many people cannot stop worrying because they are not or cannot be happily married. As an ill-adjusted sex relationship is one of the most fertile causes of ill-adjusted, diseased, or disordered lives, and as society okays sex relations only when solemnized or legalized by a marriage rite, we may turn to that very important question, How can we be happy though married?

CHAPTER XV

HOW CAN WE BE HAPPY THOUGH MARRIED?

Marriage is necessarily a gamble, but when the odds against its happy ending are so great that a natural-born gambler like man won't chance it, there must be something wrong about marriage—or about man.

If marriage is wrong, society is rotten. For this reason: Man is naturally a marrying animal. The woman he marries is the natural center of his life, even as women in general are the biologic center of the human universe. That universe cannot thrive if its center is unhappy. Unhappy marriages are dangerous, rotten spots in the social fabric, and unmarried adults are unnatural biologic creatures.

Our first question, then, is: Why so many celibates, divorcés and mismated couples who would be divorced if they could or who accept unhappiness as the will of God? The answer to that question will clear the way for our real problem: How can the odds against happy marriage be reduced?

I said "reduced." The odds never can be eliminated entirely, for marriage is a gamble; in fact, death is the only certainty in human affairs. But too many marriages these days are inevitable failures, too many couples marry with no more chance of living happily ever after than of breaking the bank of Monte Carlo.

Not all these mismated couples will end up in a divorce court, or one or other of them in an insane asylum. By no means. Thousands of wives will endure the tortures of the damned at the hands of ignorant, selfish, brutal husbands, and thousands of husbands will be nagged, scolded, snarled at, and henpecked for life rather than admit failure in a divorce court, or because they fear a jump from the frying-pan into the fire. They go on with it, drag out wretched existences, lead drab lives, and contribute as much to human welfare as stray cats and dogs. Such marriages are rotten spots at the very heart of human society.

Consider the case of Tom Brown and his wife Fanny. Neither Tom nor Fanny is so abnormally unfit for a happy marriage as to provoke comment; in fact, their community looks upon them as a happy couple. Yet I know that neither of them has enjoyed one day of happy married life in twenty years. Unhappiness is disease.

Tom, the son of a rich merchant, sowed large crops of very wild oats over a wide area before his marriage. Fanny grew up in a home where religion, chastity, and female frigidity were supposed to supplement normal secondary sexual characters for making a female attractive to male eyes. Tom, ensnared by her natural beauty and blind to her acquired sex charms, used his wild-oats technique to rush her off her feet. And the "carefully" reared, tenderly nurtured Fanny, brought up on the Puritan doctrine of sex's inherent wickedness, eloped with the bounder. Her family heard of Tom for the first time through a telegram announcing their marriage!

I may remark in passing that the prolonged hostility of Fanny's family toward Tom aided him in no way to accept Fanny as a joy for ever.

Fanny's disillusionment was complete long before the honeymoon was over. Tom's disillusionment and his contempt for his wife began the first day—when she cried because he said "damn."

Fanny's desirableness in Tom's eyes diminished perceptibly with mere possession. Her tears and grief at his "animalism" only confirmed his impression that she was a poor "sport." He could not understand his wife's grief over the "tragedy," because he could not see the tragedy. His habits and experience had given him certain ideas of how to treat a woman; experience and habits did not avail him now. Fanny soon came to regard the foundation of a satisfactory married life as her worst enemy. It was only too true, as she had heard, that the whole thing was degrading and a necessary evil!

Toms and Fannys form a fairly large class of married couples. They started with nothing in common except mutual sex attractiveness. Otherwise they were utter strangers. Their bents, tastes, interests, ideals, and outlook on life in general are as different today as when they married—too different to be reconciled or to be lived with comfortably.

Any observant outsider knowing their codes could have predicted that a marriage between Tom and Fanny was destined to mar two lives. Perhaps they themselves could have guessed the outcome. Why, then, didn't they? Why face a future of fairly inevitable misery? Because love is not only blind but deaf and dumb by nature, and has a tough conscience. It must be so or the species dies. All the cottonwool in which Fanny had been wrapped and all the ice in which she had been packed did not insulate her at the critical moment. Tom's experience was not complete; he wanted Fanny even if he had to marry her. They were not fit for an enduring and happy marriage—only for mating. Why, then, didn't they separate?

This marriage took place a generation ago. Divorce was serious then; it left a stigma, especially on the woman. Fanny had grown up on the assumption that she would become a wife; there was nothing else she could become. She might admit failure to herself; she could not advertise the fact to the world. She had made her own bed—she would have to lie on it.

They drift on, have four children, are rated as successful—Fanny's jewels alone are worth a quarter of a million dollars—and are certainly prominent members of their community. And yet today, at the end of twenty years under the same roof and in the same church, clubs, and golf course, they are as far apart as the poles.

As Tom said only the other day: "I'm in so wrong with my wife that *everything* I do is wrong; *it doesn't make any difference what I do, it's* WRONG." And only the day before Fanny had said: "I wish I were dead; there's no other way out." And I think she meant it.

While this case is fairly normal, it is more typical, I suspect, of couples married a generation ago. Tom's philandering had been so extensive that it was well-nigh impossible for him to become completely attached to and absorbed by one woman. Her training had gone to the other extreme and in a way was almost as vicious. Conceivably, married to a man who would have conformed to her standards of what she called "decency," she might have lived happily. Even then it would have required a mate of great tact and intelligence, for her acquired attitudes toward sex had to be re-formed before she could function as a normal wife.

One point more. Tom's and Fanny's habits were not only incompatible, they were so different that they forced them apart—forced them to face in opposite directions. They could not help each other as a team, they impaired each other's individual and social usefulness.

Their home, in short, is a weak spot in the social fabric. To set forth just how weak would involve examining the effect of this divided house on the lives of four children. That the effect was great and bad there can be no doubt. Therein lies the enduring wrong society suffers as the price of every unhappy marriage. But beyond noting that two of the Brown children have already been expelled from college—a son for cheating in an examination and a daughter for drunkenness at a fraternity dance—we must pass them up as another story which I cannot enter into here.

John Black and his young wife came to New York about ten years ago. John had a modest pay job as illustrator in a newspaper office. His wife had some talent for singing and hoped to get into musical comedy. They set up housekeeping in a little one-room flat with a cubby-hole kitchenette. A happier couple could not be imagined.

John's rise was fairly steady, but not spectacular. A baby came to occupy the wife's attention and keep her mind off the stage. Eight years passed. Every two or three years they moved to larger quarters, and in every way seemed as happy and contented a couple as one could hope to find anywhere in town. John was a cheerful and faithful husband and ever ready to do his share of the housework, often taking sole charge of the dinner. They seemed truly mated and destined to live happily ever after.

The editor of a rival newspaper noted John's work and asked him to try a comic strip. John transferred his allegiance and started in. It went so well that before the end of the year his stuff was syndicated; he soon had an income of over $20,000 a year. Then and there he began to blow—he could not stand prosperity.

I haven't seen him for a year, but a mutual friend told me recently that he goes home only three or four times a week, is often drunk, has lost interest in wife and child: in short, has taken on an entirely new line of interests, none of them compatible with the married life he had led for eight years.

A somewhat similar case is that of my friends, the Greens. They trotted along in double harness for five years as contentedly as you please, then he struck oil, figuratively speaking, and began to aspire to social heights his wife could not attain. The stock example, of course, and typical of so many cases of this sort, is the rich banker who abandons the old gray mare for some smart young thing.

The Brown failure was inevitable, the Black and the Green—and the banker—almost inevitable. All that was needed was a new and unforeseen situation. Black—and the banker—stepped out because they could; they were traitors, easily led astray, easily seduced. Their marriages were wrecked because they jumped the track. They are likely to wreck any marriage they contract. They will not keep a contract; they are open to the highest bidder. The banker who sold out his wife probably started his bank by selling out his father.

From these two general categories of unhappy marriages (abnormal—but not necessarily pathologic—sex habits; and unmoral—but not necessarily immoral—social habits) let us turn to the more serious and even fatal impediments to a happy marriage.

Joe White is a university graduate, holds a high position in the newspaper world, and is a paragon of virtue and decency, but for years has suffered from chronic indigestion. The plain fact is that he has no stomach for his wife because his mother still absorbs his store of love. He has never been able to transfer to his wife a normal amount of love. Bitterly aware of the fact as he is, and having no idea of its cause, his vital processes revolt, and that gives him a physiological excuse for a psychological ailment—inability to function as a normal married man.

This case differs primarily from the Browns in that we are dealing with a condition based, it is true, on habits, but on habits so deeply tied in that it is next to impossible to re-form them—that is, to substitute a new set of habits. White is so abnormal as to be mildly insane.

This will become clearer when it is understood that normal mating and happily mated life imply a complete transfer of love to a member of the opposite sex.

Any male who reaches maturity still tied to his mother in the thousands of ways by which mothers can tie their sons' love to them, will not find it easy to allow another woman to absorb all his interests. He may not know how completely every part of his nature covered by the term "love" has been conditioned to respond only to mother stimuli. His behavior, both bodily and verbalized, may be as pure toward his mother as the snow itself, but unless as boy or as young man he had begun to transfer his normal affection for his mother to girls, he is not likely to transfer it to some woman when he reaches adult life. He is likely to be unhappy in his married life.

I am not at all certain that Joe will die of indigestion; it is as likely that he will take his own life, or that his behavior will become so abnormal that he will be adjudged insane.

This journalist typifies a class of both men and women predestined to fail in marriage. A girl may reach womanhood with her affection so set on her father that she can be happy in marriage only as she finds a man who can take her father's place. This, of course, is as difficult for her as it would be for my friend Joe to find a woman who would in every respect be a complete substitute for his mother.

Nor will the man or woman who has completely fallen in love with self find it easy to transfer love of self to a mate. This type of abnormality is called auto-eroticism (self-love), or Narcissism. (Narcissus, son of the river god, rejected the advances of the nymph Echo, and was punished by Aphrodite, goddess of love, who caused him to fall so deeply in love with his own shadow in the water that he pined away in admiration of it.)

In other words, love cannot be in two places at the same time. One can so love self, father, or mother, that it is impossible to love anyone else. Men and women can also become so completely immersed in religion, business, profession, trade, or vocation that they can find no room in life for a new interest and feel no urge to participate in a normal, natural, social life.

None of these social or biologic monstrosities has any business with marriage, or is likely to be happy or contribute to the happiness of a mate. For such, it does not pay to marry. Unmated, they may not live a full life, but at least they do not spoil two lives.

Why, then, do such people marry? Why did my journalistic friend marry? I do not know the facts in his case, but probably because he grew up with the idea that he *should* marry; and possibly he was a passive agent—his wife may have picked him, he fell because she shook the tree.

But there is no need to worry much over men who find no time or inclination to marry, or over women who prefer their freedom or their dogs to a mate—they cannot inhabit the earth. Immortality belongs to those who mate and propagate their kind, as do the fulness of the earth and its future.

With these improbable or impossible candidates for wedded bliss disposed of (single bliss is pure fiction), let us have a look at marriage in general. And I know of no stranger or more fascinating chapter in human history than man's attitude toward marriage, or, more specifically, men's attitude toward women and women's attitude toward men.

Probably every conceivable form of marriage has been tried out at one time or another in some part of the world.

Forests of wood-pulp and barrels of ink have been wasted in idle speculation as to the nature of marriage and whether man by nature is a polygamous or a monogamous animal.

Just what our cave ancestors thought about marriage, what sort of marriage ceremony they had, or how many wives or husbands, we cannot of course know, but we must infer that marriage then was not essentially different from what it is today in any self-respecting ape community, say the chimpanzees of the Congo forests.

When a young male chimpanzee comes of age his sex impulse drives him forth to find a mate. The only way he can find her is by his senses—eyes, ears, nose, *et cetera.* When he finds her he courts her, if he likes her looks. If he finds favor in her eyes they mate. That mating constitutes an honest marriage and endures till the end. They more or less literally walk through life hand in hand, fighting for each other, faithful to each other, loving each other.

While she rears the children, he serves primarily as protector and secondarily as playmate and teacher to the youngsters, but always as friend and companion to his wife, for whom he would fight to the last ounce of his strength. Would, and does. Why are there a dozen male ape skulls in any museum for every one female? Because when an ape family is discovered the female retreats into the woods with the children, while the male investigates—even up to the muzzle of a gun.

Human marriage is naturally the same. The big difference is that humans talk about it and approach the altar with a vocabulary and a set of formulæ which they have learned to use as stimuli and to which they have learned to respond.

It is more than that, of course. We approach matrimony as individuals with certain definite habits, specific repertoires of things, faces, and situations we like or dislike or fear or hate. These individual and specific behavior repertoires, or patterns, are to determine our reactions thenceforth. Not that we can't or won't change them. They will be changed, of course, as we encounter new situations, new experiences; but we can say in general that the experience we have had before marriage will determine the bent or direction of our responses after marriage.

Hence any man or woman who would marry a chance acquaintance, would buy a pig in a poke or trade horses sight unseen. Any discerning man or woman should be able to form a pretty good estimate of the character of a prospective life partner by studying his or her responses to the ordinary occurrences of life, especially behavior under stress or in sudden emergency or difficulty. No man or woman is likely to have such a valuable repertoire of socially useful habits as to fit him or her for wedded life who has not had intelligent training as a child.

The first requisite of a happy marriage, then, is the natural and ancient requisite of sex attractiveness—each mate should look desirable to the other. But while that sufficed at the dawn of human history, and is still the foundation of all happy marriage, life has become so complex, so many new factors have been introduced to break down the old economic and political status of women, that mere sex attraction does not necessarily hold couples together or make for continued happy married life.

Never before has society tempted so many to strive for individual achievement. The male of the species, as mere head of the house, provider, and father, is tempted in a thousand ways unknown to former generations to fall for individual gain or strive for individual glory. To be a happily married wife or the industrious, intelligent mother of a brood of children no longer brings the social glory and distinction it once did. Women today can win plaudits, even great fame and wealth, in fields heretofore closed to them—closed by law, custom, or public opinion.

What I am driving at is that a lot of marriages fail these days because one or the other partner anticipates failure with equanimity. Formerly, to break up a home was thought of as a calamity; nowadays people marry prepared to have a break-up as soon as something better turns up.

The whole institution of marriage has changed enormously. We may even venture the guess that the break-up of the old home is not a total loss. No intelligent mother today would bear her child unaided or rely on an old-fashioned midwife. There is no reason why children may not be brought up by trained hands more intelligently than they were brought up in the past. It will certainly be for the good of mankind in general when children are brought up without the dominance of a brutal father or a harassed and overworked mother.

Returning from this sociological excursion, we may set it down as a general proposition, that no marriage can run a happy course unless both partners play the game honestly, lovingly, fearlessly, and patiently. For marriage is a game. It is more than a partnership or a contract or a promise; it is a play in which human emotions must inevitably predominate.

There will inevitably come times when the motive force is not love. There will be worries, troubles, sickness, economic difficulties, bitter disappointments: passion is incompatible with these states, and of course any marriage founded on mere passion rather than on mutual devotion and love in its broadest and generally understood sense, will have hard sledding in such conditions or situations. This does not mean that one or the other can safely replace love by anger, resentment, petulance, or recrimination.

I suspect that countless marriages fail to turn out as happily as they should because one or the other mate gives way to bursts of temper or tears or some form of self-pity or recrimination over some slight thing or trivial incident which should have been passed over without wrecking the car.

The man or woman who as a child habitually flared up when an act or opinion was questioned and responded with resentment or hard words or tears, will find it difficult not to resort to such behavior after the novelty of marriage has worn off. Yet these displays of childish petulance must be repressed if the marriage is to have a fair chance of success.

These little habits, if exhibited in early married life, are likely to become intensified because of the fact that such displays of feminine traits on her part and masculine traits on his are likely to provoke them both to further displays until, as in the case of my friends the Browns, whatever he does is wrong, while to him she embodies all that is frail and contemptible in woman.

It is astounding how these contemptible infantile hangovers can grow like poisonous weeds in the family garden. They must be pulled up by the roots as fast as they stick their ugly heads above the sod. Everyone who has at heart the happiness of his or her own marriage must understand that these infantile responses are not only *infantile* and childish, but that they can choke the life out of what should be the finest and most perfect of all human relationships.

But of all emotional reactions as a homewrecker, jealousy is the most insidious; in fact it is probably at the bottom of half of all marital squabbles and leads to more unhappiness than any other one emotion. My advice to anyone engaged to marry a jealous man or woman is: "Don't"; and to anyone married to a jealous man or woman: "Be careful." Jealousy can lead to murder, or suicide.

Examples of jealousy leading to murder are all too common. I shall give one illustrating the other phase of this source of family tragedy.

Earl Gray, a schoolmate and an intimate friend of mine till his death, became engaged in his senior year, it being understood that there could be no wedding until after he had completed a three years' course in the graduate school. Late the following summer his father died, leaving him a pittance. They decided to marry on New Year's day, and after a three days' honeymoon in New York City he was to resume his studies in Cambridge. Both quite understood that this was not an ideal arrangement, that there would have to be great economy, and that until he got his higher degree he would have to work very hard.

He turned up the first day of school an hour late—something I had never known him to do before. He had a worried look and seemed depressed, and over luncheon that noon confided his trouble to me. His wife had given way to a flood of childish tears and petulance when he started off that morning, protesting that he *could* not love her any more or he would not "abandon" her three days after marriage.

She was jealous of his work. Had he shipped her home that same day, or threatened to, he might have saved them both a world of heart-burning and years of married misery, but he could no more have done that than she could refrain from tears at what seemed to her a slight. Instead, he apologized and made rash promises, thereby making that kind of response automatic the next time she thought she was slighted.

Three years later we took our degrees together. The Grays went one way, I another, but their relations had already become so strained that an evening with them was a source of distress to all of us.

Unwittingly he had yielded so far as he could to all her childish and imperious demands for time and attention, but he was passionately fond of his work and bent on making a success of it.

She not only resented his interest in his work but was actually jealous of his affection for his laboratory and grudged the few dollars that necessarily went into the purchase of his laboratory supplies. She resented too the old friendship between us, and when I happened to allude to a trivial incident that had occurred in the laboratory she reproached him for not having told her, intimating but too plainly that he had "confidences" which he withheld from her. She had already got the bad habit of airing her grievances by innuendo in the presence of a third party.

Except for two or three brief meetings, I did not see Gray again for more than fifteen years. Then, having occasion to go to the town in which his college was situated and where he was successfully installed as head of his department, I unhesitatingly accepted an invitation to make their house my home for the week.

There were three children and outwardly it was as happy a home as could be imagined, but long before the week was up I realized that I was living amongst the cinders of a spent volcano. She had taken possession of him body and soul, and he, in mortal terror of her, had only one idea in life—compromise: anything to avoid a rupture, anything to prevent letting loose a flood of recriminations, tears, and even hysteria. Under his own roof he was afraid to be natural and happy lest his motives be misunderstood. Outside, he was an entirely different man.

Her condition more and more alternated between the love and hate of an insanely jealous wife. She became jealous even of his success as a teacher, jealous of every girl in his classes, jealous of his love for his children, jealous of his friends. No surrender that he could make sufficed to appease her. Finally she began to threaten him with talk of suicide. And then he made the last final and fatal mistake —hired a nurse to watch her. This drove her to desperation, and, eluding the nurse, she hanged herself. He was killed on the way to her funeral.

That woman as a girl had learned to get what she wanted by petulance, pouting, sulking and weeping. She did not hesitate to use these weapons when ordinary ones failed. They failed to control her husband—as did her threats of suicide.

Quite as many marriages go on the rocks because the husband brings to the altar infantile habits of getting angry, losing his temper, or stamping up and down when crossed. A tactful wife who has set her heart on making her marriage a thing of beauty and a joy for ever should know that her husband, unless he is suffering from senile decay, can be re-trained. If his first outbreak of bullying does not buy him anything or get him anywhere, especially if she absolutely ignores it, he is much less likely to charge the next windmill at red-hot speed. Blustering was probably the only way he could get recognition from father or mother or the family in general; any normal boy would rather be scolded than ignored.

If she continues to ignore his childishness, he is likely to stop blowing off steam and blustering about every time he is crossed; that makes it easier for a new habit to be substituted for an old one. In this connection it should be remembered that the human being responds normally with a smile to a gently rubbed skin, as the cat purrs when it is gently stroked

—but that if the skin is rubbed too long it becomes calloused, and if too hard it blisters.

The finest illustration I know of a wife's control over her husband's actions is found in a letter Professor Hooker wrote to young Darwin asking him to go as naturalist on what proved to be the epoch-making voyage of the Beagle. Hooker, then chief naturalist at Cambridge University, had been asked to nominate someone for the voyage. It was such a gorgeous opportunity that he wanted to go himself, but the mere recital of the idea to his wife brought a "pained expression" to her face; and he gave up the idea and nominated Darwin.

Think of having a husband so well trained that you could, by a pained look on your face, make him give up the opportunity of a life-time. And then think of what almost any woman with a little tact can train almost any man to do.

Brought up differently as the man is, seeing things differently as he does, he inevitably brings to the marriage altar a different vocabulary, a different set of values, and a different set of emotional habits from those of his wife. Presumably these acquired sexual differences are less today than they were a generation ago, but they still exist and presumably will exist to the end of the chapter.

They can never quite see through each other's eyes; his world *cannot* be her world; her world *cannot* be his. But that is no reason why they should quarrel about it; all the more reason why through her eyes he should try to see something of her world—it is vast and interesting and worth exploring. Equally weighty is the reason why she should with his aid explore his world.

Only as each attempts to realize that the other brings to the altar a different world, as each attempts to make allowance for that fact, understand its significance and become adjusted to it, can marriage yield the happiness it should;

for it is literally true that because of their very nature and their upbringing they are so different that a lifetime is hardly long enough thoroughly to become acquainted with each other.

To be happy though married means surrender—not the hauling down of a flag but surrender of the idea that we are always right, that we only can know what is best, and that we individually are the center of the universe. It means that we must put into the pact such willingness to make it a success, such zeal for its success, and such decency and reasonableness and enterprise as we should expect to put into any other relationship where team-work is demanded and where without team-work failure follows inevitably.

Work. Thousands of modern marriages fail miserably and shamefully because the wife can't, won't, or is not allowed to work. There is little to choose between an ignorant and a lazy woman, or between a slave and a parasite. Marriage is no more a discipline than life itself, but like every other human institution it can do the work it was intended to do only when the people concerned work for it. Too many throw up the sponge before a knock-out is in sight—they would fight each other rather than fight to make their marriage a success.

The business of marriage is a family, without which human society cannot endure. Human society, the universe of human affairs, cannot thrive without happy homes—homes founded on the mutual devotion of man and woman inspired by a mother's love.

Happy homes! I think I am not old enough yet to be a pessimist, and hope I am enough of a scientist to keep an open eye and suspend judgment on what is going on right now in this era of unparalleled, revolutionary, and speed-mad change. But I am forced to wonder if all this change we now flounder about in is to make happy homes impossible. Or will "homes" of any kind become obsolete? We prate of "progress": is our brand of progress incompatible not only with homes but with happiness itself? We should be the happiest people in the world. Are we? And if not, why not?

CHAPTER XVI

WHY AREN'T WE THE HAPPIEST PEOPLE IN THE WORLD?

WOULD you give a million dollars to be happy? I know a Wall Street banker who says he would give a million for a college degree. Would that make him happy? He thinks so; but would it?

Did you ever try to define happiness? It is not so simple, is it? And yet we know when we are happy—and spend our lives pursuing happiness. But it cannot be bought. Pleasure, yes. Pleasure can be bought in car load lots and by the day; but happiness must be lived. It inheres in certain ways of living.

Happiness is not unlike freedom—an abstraction that has meaning only in the concrete. To say that we are free because this is a free country and are happy because this is a happy land is to say nothing about my freedom or your happiness. Our talk abounds in such generalities, but they get us nowhere. Your happiness and mine are concrete affairs, personal, individual. You may know that you are happy, but how are you to know if I am?

I may appear to you to be free—free by virtue of constitutional rights, free of hunger, pain, debt, of obligation of any sort—and yet be the slave of habits which hold me as in a vise and prevent my moving, speaking, thinking or acting as I should like. I may seem to you to be happy; I may even consider myself happy—happy in the fact that my habits will carry my feet along as many paths of life as I need tread, as far into thought as I need venture.

Countless people are slaves to such habits, creatures of such habits. In their contentment and self-sufficiency they may find the bliss of ignorance but not the happiness of eternal youth.

I use "youth" as a biologic symbol. Youths are not necessarily happy; youth is. It means freedom, strength, courage, curiosity, adventure, growth, plasticity, movement, action; disdain of danger and death and indifference to self; passion to discover life and create it anew. Youth faces the future, champs at the bit, dares greatly, counts no cost. Without convictions, it will explore; without wisdom, it will experiment; without knowledge, it will learn; without adventure, it will venture.

Youth is as remote from infancy as from senility. It created human culture and alone can save the human race. Human immortality flowers with youth; enduring happiness abides in eternal youth. To be happy is to be young.

There is the background, biologically sound and psychologically correct, and necessary—if we are to talk about happiness understandingly. Against that background we can look at people, measure them. It may not suggest happiness to you: your idea of happiness may be carpet-slippers, an open fire, and Plato's "Republic"—or a castle in Spain, or an A.B. degree.

If happiness were on sale and we had plenty of money, probably no two of us would buy the same brand. That fact kept me from trying to define happiness and forced me to seek its criteria. Infancy is too ignorant for happiness, senility too dead. Youth in its courage and virility is life itself at its peak and the only symbol for happiness that can stand in a court of science, the only measure of happiness that is free of personal bias.

Youths are not necessarily happy. Now and then a schoolboy dies by his own hand, finished with life like a spent old man; or failing in life, like a candle in a vacuum. Youth itself is not to blame so much as parents, teachers, society, a civilization which can so quickly satiate a naturally insatiable creature or pervert a curiosity which should outlive nine lives.

In other words, happiness is not necessarily restricted to the adolescent age. There are old men of twenty years, young men of eighty; otherwise "the happiest people in the world" would end in the words—"young people."

How about New Yorkers? Are they happy? How could they be? Happy individuals, of course. But what is there in the work of the average clerk, bookkeeper, chauffeur, stenographer, motorman, cook, waiter, tailor, teacher, electrician, plumber, bricklayer, telephone operator, elevator man, janitor, subway digger, that for him or her is in any sense creative work or immediately connected with the art of living? What do they get out of their six-, eight-, ten-, twelve-hour-a-day jobs?

Enough to prolong life, to continue existence; but from the work itself nothing that is related to their own lives or that can give them the thrill which comes only from doing things that are delightful in themselves and make for happiness. They quit their tasks at the end of the day to return to such lives as they can find time to lead when the day's work is done. They are not unlike horses unharnessed at the end of the day in order that they may partake of food and rest —necessary preparations for the next day's work. They live second-hand lives.

They buy pleasure at a movie theater or in a subway ride to Coney Island. They go for pleasure as they go for a loaf of bread—and call it happiness. And because they expect nothing different they may be said to be old; they have lost their youth—sold their birthright to explore, manipulate, build and create, for a meal and a cave. And that many of them know it, we may infer from their cry: "Make me a child again, just for tonight!"

They are not doing anything but make a living. They are not slaves, nor yet yoked oxen; they are housed and clothed comfortably enough, and they have enough to eat. But after all, few animals in a state of nature are worse off. Man by nature is not that kind of animal; he is a creator and not a mere liver. It is inherent in his very nature that he should not be content with mere living; otherwise he need not have parted company with his ape ancestors.

New Yorkers are a queer lot. Perhaps they do not expect happiness, perhaps they gave it up for the privilege of living in New York. Or perhaps they look upon themselves, as did the early Christian martyrs, as saviors of civilization! At any rate they are martyrs and probably demand ecstasy as proof of their victory. But a martyr has only one victory and it does not necessarily last. At the age of eight I won every marble in Kirkersville, Ohio, but my ecstasy was short-lived —my father made me give the marbles back. Was I unhappy? Not at all. It was a glorious victory and I had not lost my youth.

John Brown is a New Yorker and as happy a man as I have ever known. He is no martyr, nor does the feeling that he is near the center of the universe interest him enough to make him a mere spectator. That might make some people happy—by taking their attention from themselves. John does not find happiness second-hand. Otherwise he is typical—there is nothing distinctive about him. He is no great exception to any general rule; he is normal in every respect. Does the secret of his happiness lie in that?

John has never been really sick and in his fifty years of life has never stopped manipulating and creating. Sickness is pathologic; to stop "creating" is also pathologic. Neither makes for happiness—disease is dis-ease.

Suppose John had any one of a hundred defects I could easily name, defects such as may be found among human beings. But he has none. He inherited a naturally sound body. He has all the parts of a life-sized man. His early training was such that he is afraid of nothing. He hates nothing but ignorance.

John's appetites are normal. His sense organs are keen and receptive to the world at large. He was not trained to go around shutting his eyes, closing his ears and holding his nose. He is not so finicky that he cannot take hold of anything that challenges his curiosity. Early in life he learned habits of bodily cleanliness and decency, and of walking and talking straight.

The net result is that John's digestive system gives him steam enough to keep him going as a whole and as a live man. Going where? Where he likes to go. He has never worked, as work is generally understood; he has never held down a job, as jobs are usually held down. He is a creator, a builder, a doer, a man of family, a man of affairs.

But above all John is a manipulator. He manipulates not as our ape ancestors did—merely monkeying with things—but as our human ancestors did—learning through manipulation to control things for human ends and thereby getting much out of life because they never had to stop to live. John makes his living by living.

I do not mean to be trite. I am trying to express the idea that John at fifty is younger than many boys at fifteen, keener about everything going. I did not say more efficient! The most efficient clown in the show is often the saddest man in town and off-stage is more dead than alive. We tend to make efficiency the big business in life. Mere efficiency never got the human race anywhere, and never will. It should not be worshiped as a fetish.

Happiness comes not by getting something done but in the doing of it: the day by day, hour by hour, minute by minute immersion in activity which satisfies innate desires for action.

A happy community is neither senile nor crippled; it retains its youth. It is virile, healthy, fairly free from danger, has a reasonably cheap and abundant food supply. It is not oppressed, suffers no great barriers of rank, no threat of prosecution, no tyranny of political despot or religious priest. It is free from poverty, disease and crime, free from religious intolerance and military oppression, free from the bullets of the fanatic and from the demands of the bandit who shoots to kill. It must not have too much or too little rain, too great cold or too much heat, or be threatened by earthquake, hurricane or pestilence.

There is no such place and there are no such people, you say. Well, I have found such places and such people. Even in India—but you would not believe that. And in China . . . I suspect that before China went on the rocks there was as much happiness per square inch of Chinese territory as was ever found in any country in the world. And in Japan . . . If happiness depended on mere achievement, I should nominate the Japanese for first place. But it does not; and as the Japanese just now are rather dubious about their achievement, I must rule them out.

South Sea Islands? There is a paradise! "But they are so far away, and, besides, the islanders aren't civilized!"

Have you any clear-cut definition of civilization? I have not. We talk about progress—its march, its wheels; but where do we go from here? Which way is our civilization headed? You may know. I do not.

Could a South Sea Islander be as far along in life as we are even though he has produced no Lindbergh nor heard the purr of an airplane? Does our obsession that money talks, and the fact that it never stops talking, confuse us as to the worth of our civilization? Mere possession does not necessarily make for wholesome living, nor does din of factories, railways, automobiles and airplanes make for richer living. The assumption that our triumphs in the physical and biologic sciences make life more certain and the world safer has not been verified by the test of time.

Many of our ills are not inherent in human life; they are toxins generated by the life we lead. We must conquer them or they kill us. For example: much money and energy are now being put into the solution of two diseases, cancer and tuberculosis; and every advance in the understanding of them is hailed as progress.

My South Sea Islander is not interested—and you set him down as uncivilized. More to the point is the fact that he is not concerned—such problems do not exist for him; he need no more worry about them than about next winter's coal or whether dreadnoughts are obsolete and should be scrapped.

Make no mistake about one thing: there is nothing empty about the South Sea Islander's life. He is neither moron, do-little, nor dreamer. He is an actor, and on no mean stage. Mean! To speak of his sky as turquoise, his sea as sapphire, his forests as emerald, and his sunsets as liquid opal, would be to speak in terms of rocks and stones, baubles that grown-ups in somber climes play with—but it would not be to describe them. They baffle description—as do all the glories of nature which move our souls to gladness.

And climate! Freedom from cold which would force him to hibernate, grow a pelt, encase himself in another animal's skin, or install a central heating-plant—this one factor alone wipes out his need of confronting the eternal problems of: What shall we wear? Why doesn't the janitor give us more heat? Would that we could afford to get out of this beastly climate!

The South Sea Islander's life is as full and rich as is that of the average American. In all that makes for happiness it is fuller and richer. In the variety of experiences he encounters between birth and death—in his open-air activities, hunting, fishing and tilling the soil; in his ceremonial life, with its naive mythology and intimate contact with his gods; in his knowledge of his world and his capacity to mold it to his own ends; in his more intimate relations as child, youth, lover, parent and grandparent, and as one of a community of friends and a member of well-knit social organizations—he lives a rounded-out life, and lives it so well, so successfully, so vigorously and robustly that he keeps his youth.

I spoke of "gods." "Superstitions!" you probably exclaimed. And you very likely felt sorry for the poor degraded savage—drifting rudderless in a world of fearsome shadows, lurking enemies and hidden meanings—groveling like a coward before every breeze.

Now the fact is that you and I have wasted a lot of breath—which, as my Scotch wife would say, we might have saved to cool our porridge—worrying about the heathen bowed down to wood and stone. Maybe he is, but in no one of the five continents have I ever found any evidence of such heathen fear.

The native of the South Sea Islands lives in a world he knows. It is a world in which he has made friends, with which he is at peace, and with which he is in love. He finds no more things to be afraid of in walking through life than does the native of Licking County, Ohio; and he is just as superstitious as a Harvard freshman—no more, no less.

We of this Machine Age have got so far from "manufactured" objects that we cannot afford to own the chairs our grandfathers made with their own hands and sanctified with use; only the world's richest men can collect colonial second-hand furniture to their heart's content.

We have no time to create what we want because we must make money for what we need. If we have any time left we go somewhere to buy happiness—a banquet, a picnic, or the weekly, monthly or annual dinner of our lodge, club, fraternity, party, sect. Do you ever sigh for the time when every day will be Sunday and every night Saturday night? That is the only calendar my South Sea Islander knows. For him life is just one eternal, endless lodge-meeting, family picnic, annual convention, husking-bee, Christmas, New-Year's, Fourth of July, and Thanksgiving Day.

Doesn't it begin to be plain that my South Sea Islander is happy in his world because he himself made it and made it to fit himself? He does not get his religion from one source, his clothes from another, his fashions from another. He is not beset with reformers, bedeviled with propaganda or hounded by bill-boards and selling-talk.

He himself has made all that he uses, and made it skillfully, cleverly, beautifully. He is an accomplished performer in more ways than I have time to name. He has fine control over his body, knows how to put it through its paces, knows how to get out of it what he wants to get and as much as he needs to get to carry him about and keep him tuned up. Do you and I get more out of ourselves?

Some years ago I visited in one day two villages in what were then the German South Seas. One had accepted civilization; the other had declined it—and I was shown the oven where civilization's emissary had been roasted. The converted village was a perfect picture of sordid decay in its pigs and chickens, its gardens, yards and outhouses, its dwelling-houses and everything within them; and the faces and bodies of the natives themselves bespoke abject misery. Everybody had been "saved"; but I found no man, woman or child who looked like a healthy human being.

They might have been happy, as I conceivably might be were I a Moslem dying on the field of battle with the vision of Mohammed's paradise before my eyes. That is not the kind of happiness I am talking about, nor is it happiness as I conceive it; it may be just as good, it may be a "higher" life.

The other village, with its "long pig" oven ready for the next drummer from progress, was a going concern, full of life, full of vitality, full of men, women and children who could smile, who could roar with laughter, who enjoyed their food, who could sing and dance. They seemed to me to be very happy people.

The "civilized" village was dying of old age; the "savage" had the spirit of eternal youth.

If you insist that I be specific in the geography of happiness I shall have to pass over Samoa, Tahiti, the Marquesas and other Polynesian islands, for I do not know them personally. They are nearly all lost to happiness anyway—it has been reformed out of them. I nominate the Trobriand group, one of that great chain of archipelagos a thousand miles east of New Guinea.

There is a life for you! The islanders have all the charm that belongs to the South Seas in general, but they also have a system of their own. Each island belongs to a certain social and happiness-yielding organization which includes a great circle of islands.

To describe how the social ball is kept rolling year after year through that great circle would be to write a book. But just think what it involves: such fishing as you never dreamed of, such canoeing as you have never conceived—and in seas so blue and under skies so blue that the eyes dance with the mere joy of looking at them.

Throughout the great circle of islands are friends, rivals, but the rivalry is for that which makes for the eternal joy of life, for a round of happiness, the kind of happiness that can be seen, heard, tasted, smelled, embraced and talked about in the men's club and around the family circle.

Sensual? Yes. All I know about anything comes to me through my senses or through the stored sense-impressions of my fellow men. I know of no good reason why I should be ashamed of them. Nor, I repeat, am I here concerned with Grecian glory, Roman grandeur, the ecstatic smile of martyrs, the anemic joys of poets, or the cold, lofty heights of philosophy. I am looking for old-fashioned happiness: such happiness as you and I had when we were young, when we were trying ourselves out, tasting new things, getting acquainted with the world by handling it, manipulating it, re-creating it, molding it, living it, and loving all of it because it all seemed good.

I dined last night with four friends. One was prematurely bald, one prematurely old. One was a dyspeptic, one a glutton. One had an ulcerated tooth, one had no teeth, and not one of them had ever had perfect teeth. One was afraid of women. One hated them. One lost an eye in a motor accident that killed a girl. One moved to the country, which he hated, because the city's noise drove him crazy. One moved to town because the country's quiet drove him crazy. One lost his coat and collar in a subway rush. One was so afraid of fire he would not use an elevator. One had lost his appendix; one, four inches of his colon, several adenoids, and his tonsils. One was divorced, one wanted to be, and one had been jailed for non-payment of alimony.

One lost his grandfather in the Civil War, his father in the Spanish War, and his son in the World War for which his grandchildren would have to help pay. One believed in astrology and palmistry, one in total immersion, one in special creation, one in monkeys, and all five of us had grown up in Original Sin. One was a Democrat, one a Republican, two had no politics, had never voted, and were "ag'in the government." Four believed in prohibition for the masses, three believed in bootleggers, and one had taken a drink-cure. One expected to die of paresis. One had disowned his daughter. One had been disowned by his father.

Only five, all men! Five out of a hundred million. And I have not said a word about the demands on them for money to pay for charities they never heard of, wars they never started, fires they never kindled, crimes they never committed, tariffs they never profited by, churches they never attended, graft they never participated in, advertisements they never read, and for city, state and national governments which fool a lot of people all the time and some people almost no time at all.

And they had to pay an "amusement tax" for a dinner badly served and eaten to the blare, din, roar, boom, screech and scream of jazz band, rattling dishes, elevated trains, subway blasting, steamboat whistles and fire-engine sirens. And yet we talk of the poor savages enslaved by custom! I think of Atlantic City and then of a coral atoll; of Central Park, and then of the tropical forest; of English sparrows, and then of cockatoos and birds of paradise; of women with dogs in their arms, and then of women with children in their arms; of the gray Atlantic, and then of the blue South Seas; of fogs, leaden skies, blizzards, floods, cyclones, a hundred in the shade and twenty below zero, and then of sweet, soft, soothing trade-winds, of dependable monsoons, and the sapphire skies of the South Seas.

I think of dentists, and then of the hundreds of South Sea Islanders' skulls I have examined in vain for an unsound tooth. I think of being nagged mercilessly to buy things I do not need, tempted ceaselessly to want things I cannot afford, forever cajoled into doing things I am not fitted for, sternly warned to be reverent, gravely reprimanded for not being dignified, and then I think of the Argonauts of the South Seas. And when I think of the South Seas I think of eternal youth.

Why don't I go there? Well, I have been twice and am going again (*Deo volente*); and if I could get some of you to join me I'd go there to stay. Would we be happy? Probably not. But this I know: once having had a taste of the South Seas, you would sigh for more.

But why "probably not"? Because we are now too deeply rooted in our own native soil, too deeply dyed in its hues. We might possibly be happy in the Trobriands for years, but we should be driven home to die by a force as inexorable as that which drives salmon after their deep-sea cruise to the mountain brook in which they were born and to which they must return.

No child is born unhappy any more than it is born clever, criminal, wise, polite, refined or ladylike. Any child can be so trained that its life will inevitably be overcast and at best it can leave its drab level only for temporary joys, or it can be trained so that even a dungeon cannot shut out the sun from its life or crush out its happiness.

You and I, then, may not have had the happiness which should have been ours by right, nor can we guarantee our children against misfortune; but we can so train them in habits of humanness, courage, fortitude, truthfulness, decency, honor, self-reliance and sociability, and of "seeing it through" like a thoroughbred, that happiness will become part of their nature and they can preserve their youth even up to a ripe and happy old age. With such habits ingrained nothing can turn them against society, nor will society find cause to cast them out. Misfortune cannot rob them of their character, and they can even smile at death, happy in the thought that angels could have done no more.

"But how about us grown-ups?" you may say. "We are no longer children to be trained, we are set in our ways; must we go to the South Seas to be happy?"

That is a fair question. And the answer is, of course, "No." Why "of course"? Because we are not South Sea Islanders. But, as I have tried also to point out, we can, if we are not senile, learn such habits of living as will make happiness possible.

I suspect that the most common habit we have which makes for distress is the habit of living beyond our means—not only of monetary income but of vital and emotional energy. As a consequence we drag our feet through life, figuratively and literally speaking. It is plain enough that we do not get ahead in worldly goods if our daily expenditure keeps pace with, or outsteps, our daily income. It is not so plain that the same principle is behind the building up of a reserve of vital goods and wisdom.

The demands on our time and attention are enormous and tend to increase in an insidious manner. Most of these demands must be met with a no—or the waste-basket—if we are to have time to order our lives along serene and sound lines.

We are all more or less aware that we overtax our energy and get emotionally excited over too many trivial affairs, but we keep plunging in, saying to ourselves, as did old Rip Van Winkle, "I won't count this one," or trusting to the family doctor to pull us through and set us on our feet when our valves begin to leak, or our arteries to harden, or our alimentary canals to lay down on their work—when in short our bodies no longer can convert the energy in food into the steam required to live like able-bodied human beings.

I know personally scores of men and women who are habitually so emotionally wrought up a dozen times a day that, when a real crisis comes, their emotional energy can only move them to distraction, tears, flight, or blind, senseless rage. They live so intensely that a night's sleep does not suffice to allow the body to be rid of the day's fatigue products. They rise to the day's work with hardly more energy than when they quit the previous day.

Such men and women have no time or energy to live because they exhaust both time and energy in keeping alive. They go through life eternally broke. They can't get more out of life because they can't put more into life. They can't be happy because they are crowded, pushed, pulled, swamped by countless impulses which have no biologic value, satisfy no social needs, and contribute nothing to individual life, health, or happiness.

We can live no more like South Sea Islanders than we can live like Eskimos or Hottentots or our Stone Age ancestors, nor do we want to. We *can* free ourselves of much of the baggage of bad, wasteful and sloppy habits of living and thereby give ourselves more biologic freedom and a saner social organization.

For, after all, life without happiness is abnormal, slavish and pathologic. If we are not the happiest people in the world, it is not the world's fault. It is our own.

Perhaps our civilization is at fault. Perhaps our brand of civilization and happiness are incompatible. If so, civilization must go or we perish—for we are so constituted by nature that happiness is a biologic necessity for the preservation of the race. Unhappiness is impotence—in man or beast. We must choose.

But at least we can do our mite to prepare the next generation to select from our civilization whatever is fit to live with and to live for. Let us hope they will choose more wisely than we have. We have tried to run with the hare and hunt with the hounds—and got winded and confused. Coming generations may be saved from our fool's paradise if they are taught to run less for progress and profit and hunt more for health and happiness.

All preceding civilizations have created or inherited a Saviour and worshiped him as God—and failed. Our civilization, to endure, must save itself. But it cannot do it with mere words. It must square its ideals with deeds. Work. Free men and women, working for attainable human ends and for humanity's sake, and because of love for and understanding of humanity. . . .

There are those who would set a *limit* on what men and women and love can do; and we know how they get their limited ways and why. Let us be more daring. Especially let us put blinders on no human being, nor set any limit to human achievement!

THE END

NEW YORK
Publishers of BOOKS and of
HARPER'S MAGAZINE
Established 1817